

APPLICATIONS FOR ADMISSION AND FOR TRANSFER

The Constitution provides that the Board of Direction shall elect or reject all applicants for *Admission* or for *Transfer*, and, in order to determine justly the eligibility of each candidate, the Board must depend largely upon the Membership for information.

This list is issued to members in every grade for the purpose of securing all such available information, and every member is urged to scan carefully each monthly list of candidates and to furnish the Board with data in regard to any applicant which may aid in determining his eligibility. It is the *Duty* of all *Members* to the *Profession* to assist the Board in this manner.

It is especially urged, in communications concerning applicants, that errors in the record be pointed out and a *Definite Recommendation as to the Proper Grading in Each Case* be given, inasmuch as the grading must be based upon the opinions of those who know the applicant personally, as well as upon the nature and extent of his professional experience. If facts exist derogatory to the personal character or to the professional reputation of an applicant, they should be promptly communicated to the Board. *Communications Relating to Applicants are considered by the Board as Strictly Confidential.*

The Board of Direction will not consider the applications herein contained from residents of North America until the expiration of thirty (30) days, and from non-residents of North America until the expiration of ninety (90) days from April 1, 1929.

MINIMUM REQUIREMENTS FOR ADMISSION

Grade	General Requirement	Age	Length of Active Practice	Responsible charge of work
Member	Qualified to design as well as to direct work	32 years	12 years*	5 years
Associate Member	Qualified to direct work	25 years	8 years*	1 year
Junior	Qualified for sub-professional work	18 years†	4 years*	
Affiliate	Qualified by scientific acquirements or practical experience to co-operate with engineers			
Fellow	Contributor to the permanent funds of the Society			

* Graduation from a school of engineering of recognized reputation is equivalent to 4 years' active practice.

† Membership ceases at age of 32 unless transferred to higher grade.

APPLICATIONS FOR ADMISSION AND FOR TRANSFER

LIST OF APPLICANTS.

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The fact that applicants give the names of certain members as references does not necessarily mean that such members endorse.

The number in the center above each record indicates the serial number of the applicant for the current year, and that at the left the district in which he resides.

The abbreviations in *Italics* represent, respectively, *TT*, Total Time; *SP*, Sub-Professional Work; *P*, Professional Work; *RC*, Responsible Charge; *D*, Design. The figure for Total Time is determined by adding one-half the time spent in Sub-Professional Work to the time spent in Professional Work. The figures showing the amount of time spent in Responsible Charge and on Design are the estimate of the Applicant. The allowance of four years for graduation or of one-half of a year for each academic year successfully completed in an engineering college without graduation is included in Total Time and Professional Work.

FOR ADMISSION

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(8) **ANDERSON, JAMES**, Lake Forest, Ill. (Age 59. Born Lake Forest, Ill.) 1890 A. B., Lake Forest Univ.—April 1891 to Nov. 1893 with Cole, Alvord & Shields, Cons. Engrs., Chicago, Ill., on public improvements, about 1 year as Chainman, Rodman, Instrumentman and Inspector, 1 year Field Engr. at Highland Park, Lake Forest and Waukegan, and 7 months in charge of Highland Park office. *TT 2.1: SP 0.5: P 1.6: RC 1.6*.—Nov. 1893 to date in private practice of municipal engineering, surveying, etc., being member of firm, Bowen & Anderson (1896 to 1899), Anderson & Russell (1908 to 1912), and (since 1923) Pres., James Anderson Co., Inc.; City Engr. for Highland Park, Highwood, Lake Forest, and North Chicago (14, 30, 23 and 2 years respectively) and Village Engr. for Area (Mundelein), Deerfield, Grayslake, Lake Bluff, Lake Villa, Libertyville, Wauconda, and Winthrop Harbor (for periods of 3, 4 or 5 years) and Lake Zurich (20 years), all in Illinois; designed and supervised improvements for other municipal corporations; work also included improvement of property for cemetery, club, estate and subdivision purposes. Nov. 1896 to Nov. 1912 County Surveyor, Lake County; past 9 years Trustee, North Shore San. Dist., which constructed and operates eight sewage-disposal plants. *TT 35.3: P 35.3: RC 35.3: D 20*.—*TT 37.4: SP 0.5: P 36.9: RC 36.9: D 20*. Refers to J. W. Alvord, J. L. Crane, Jr., H. F. Ferguson, S. A. Greeley, P. Hansen, J. E. Kemp, C. M. Leonard, G. E. Oliver, L. Pearse, T. F. Quilty, F. A. Windes.

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(1) **ARNKVERN, ROLF ANDREAS** (Prior to 1922 Andersen, Rolf), 92 Columbia Heights, Brooklyn, N. Y. (Age 29. Born Oslo, Norway.) 1919 Graduate in Civ. Eng., Oslo (Norway) Inst. Tech. 1925 C. E., Norwegian Univ. Tech. *TT 4: P 4*.—Aug. 1919 to Jan. 1921 Draftsman and Instrumentman, Oslo Water Supply, on pipes and sewers, office and field work. *TT 0.6: SP 0.6*.—Sept. 1921 to June 1925 student, Norway Inst. of Technology.—April to May 1926 Draftsman, International Paper Co., tracing and some drafting, power plant foundations. *TT 0.1: SP 0.1*.—May 1926 to June 1928 with Dwight P. Robinson, New York, as Draftsman and Designer on power plants and office buildings, mainly reinforced concrete. *TT 2: P 2*.—Sept. 1925 to March 1926 and July 1928 to Jan. 1929 member of firm, Arnkvern & Raen, Bldrs. and Contrs., Oslo, on foundation work, design and erection of small buildings, garages, etc. *TT 1: P 1: RC 1*.—*TT 7.7: SP 0.7: P 7: RC 1*. Refers to H. H. Rode, E. M. Vincent.

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(4) **BAILY, ROBERT WILLIAM**, 4300 Spruce St., Philadelphia, Pa. (Age 44. Born Spirit Lake, Iowa.) 1907 B. Sc. in Mech. Eng., and 1910 M. E., Univ. of Wis. *TT 4: P 4*.—June 1904 to Aug. 1905 Draftsman, and June 1907 to March 1913 Contr. Engr. on design, sales and construction of municipal water-works systems, Des Moines (Iowa) Bridge & Iron Co. *TT 6.3: SP 0.5: P 5.8: RC 5.3: D 0.5*.—March 1913 to July 1915 Pres. and Mgr., Interstate Mfg. Co., Oskaloosa, Iowa, on design and construction of plant, design and sale of

warm-air house furnaces and design of house-heating plants. *TT 2.3: P 2.3: RC 2.3: D 2.3.*—July 1915 to July 1918 Pres., Bally & Allen Co., Chicago, Ill., work included purchasing steel structures, redesign, refabrication and sales to industrial plants, also design and sales of heavy duty lathes for munitions work, etc. *TT 3: P 3: RC 3: D 3.*—July 1918 to Jan. 1920 Mech. Engr., Birmingham (Ala.) Steel Corporation, at Mobile, Ala., on production studies, selection, purchase and installation of machinery for plant for fabricating steel, (4 000 tons monthly) for fabricated steel ships. *TT 1.5: P 1.5: RC 1.5: D 1.5.*—Jan.—May 1920 Mgr., Jacksonville (Fla.) Dry Dock & Repair Co., in charge of construction on wooden floating dry-dock and marine railway. *TT 0.4: P 0.4: RC 0.4: D 0.4.*—June 1920 to July 1921 selling oil-field machinery and equipment, until Dec. 1920 at Wichita Falls, Tex., then at Tampico, Mexico; work included construction and operation of 100 000-gal. water-supply system for drilling rigs, Waggoner Pool, design and sale of \$125 000 sectional houses to Cia de Petroleo La Corona and layout and sale of \$25 000 steel tank erection equipment for Cia del Petroleo El Aguila. *TT 1.1: P 1.1: RC 1.1: D 1.1.*—July 1921 to April 1923 Sales Mgr., until April 1922 with Austin Machinery Corporation of Louisiana, in Texas and Mexico, oil field and contractors' equipment, then with Athey Truss Wheel Co., Chicago, Ill., Mfrs. of crawler type wheels for Cuba and for contractors' heavy wagons, also design and patents on improvements. *TT 1.8: P 1.8: RC 1.8.*—April 1923 to July 1925 Contr. Engr., Pittsburgh-Des Moines Steel Co., Pittsburgh, Pa., on design and sale of water-works and refuse incinerators for municipalities and water- and oil-storage tanks for industries. *TT 2.3: P 2.3: RC 2.3: D 2.3.*—July 1925 to Dec. 1928 Dist. Engr., L. P. Mackenzie & Associates, Inc., promoting sales of vibrolithic method pavements in Pennsylvania and New Jersey and assisting engineers in pavement design. *TT 3.5: P 3.5: RC 3.5: D 3.5.*—Dec. 1928 to date Pres. and Mgr., Bally-Davis Corporation, Philadelphia, Licensee under American Vibrolithic Corporation for vibrolithic method pavements, Pennsylvania, Maryland and Delaware. *TT 0.3: P 0.3: RC 0.3: D 0.3.*—*TT 26.5: SP 0.5: P 26: RC 21.5: D 14.9.* Refers to G. L. Christy, D. T. Corning, R. E. Davis, J. E. O'Leary, L. R. MacKenzie, C. E. Myers, J. E. Van Liew.

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(10) **BAIN, ERNEST BATTLE**, 120 New Bern Ave., Raleigh, N. C. (Age 60. Born Raleigh, N. C.) Registered Engr., State of North Carolina.—1897 to 1900 Asst. Supt., and 1900 to 1901 Supt., Raleigh (N. C.) Water Co. *TT 5: P 5: RC 2: D 2.*—1901 to 1913 Supt. and Engr., Wake Water Co. (successors to Raleigh Water Co.). *TT 12: P 12: RC 12: D 12.*—1913 to date Supt. and Engr., Water Dept. (value of plant and equipment \$2 000 000), Raleigh; 1908 to 1915 also Supt. and Engr., Wake Constr. Co.; work has included general management, filter-plant operation, laboratory work, surveying, mapping, leveling, profiles, planning, purchasing materials, constructing gravity conduit lines, force mains and general distribution systems, inspection and installation of boilers, pumps, auxiliary equipment, etc., inventories, reports, etc. *TT 15: P 15: RC 15: D 15.*—*TT 32: P 32: RC 29: D 29.* Refers to G. M. Braune, T. S. Johnson, J. L. Ludlow, H. E. Miller, W. C. Olsen, W. M. Piatt, T. Saville, G. F. Syme.

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(11) **BARBER, DeLOSS HAROLD**, 1146 East Seventh St., Tucson, Ariz. (Age 34. Born Vermillion, S. Dak.) 1917 B. E., Coll. of Applied Sci., State Univ. of Iowa. *TT 4: P 4.*—Aug. 1917 2d Lieut., Aug. 1917 to May 1919 1st Lieut., and May to Aug. 1919 Capt., Corps of Engrs., U. S. Army, commanded engineer platoon (1½ years) and engineer company on general construction (10 months). *TT 2: P 2: RC 2.*—Aug. 1919 to Aug. 1920 Asst. Engr., Central States Eng. Co., Muscatine, Iowa, until Jan. 1920 being Chf. of Party on drainage and flood-prevention work, then in charge of work in Drainage Dist. No. 2 Muscatine County, consisting of preliminary survey for drainage system, design of new system, report to Board of Supervisors and construction engineering. *TT 1: P 1: RC 1: D 0.3.*—Sept. 1920—May 1924 Instructor in Science and Mathematics (2 years) and Asst. Principal (2 years), High School, Muscatine. Summers 1921—1923 and June 1924—March 1925 in private practice at Muscatine, most of time as member of firm, Howenstine & Barber, chiefly municipal and drainage engineering. *TT 1.5: P 1.5: RC 1.5: D 0.2.*—March 1925 to date with Water Resources Branch, U. S. Geological Survey, as Jun. Engr. in charge of one of principal Colorado River stations (1¼ years) and of field headquarters handling about thirty smaller stations in Eastern Arizona (9 months), and since Jan. 1929 Asst. Engr. *TT 4: P 4: RC 2.*—*TT 12.5: P 12.5: RC 6.5: D 0.5.* Refers to H. C. Beckman, W. E. Dickinson, J. H. Gardiner, R. B. Kittredge, B. J. Lambert, M. MacKenzie, C. H. Young.

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(14) **BLUE, WALTER ANTHONY**, 2137 North Sixty-Ninth St., St. Louis, Mo. (Age 28. Born Thomasboro, Ill.) 1922 B. S. in Civ. Eng., Univ. of Ill. *TT 4: P 4.*—June—Sept. 1922 Jun. Highway Engr., Illinois Div. of Highways, being Field Inspector on construction

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of bridges and pavements. *TT 0.1: SP 0.1.*—Oct. 1922 to Feb. 1925 Rodman and Instrumentman, Illinois Central R. R. Co., laying out and supervising construction of drainage work, yard extensions and bridges. *TT 1.7: SP 0.7: P 1.*—Feb. 1925 to March 1928 Instrumentman in charge of construction, Southern Illinois & Kentucky R. R. Co., laying out and supervising construction in open cuts and tunnels, bridges and culverts. *TT 3.1: P 3.1: RC 2.1.*—March 1928 to date Engr. and Supt., Nolan & Kraus Constr. Co., Gen. Contrs., in charge of plant, layout and design, and construction of roads, bridges and buildings. *TT 1: P 1: RC 0.7: D 0.1.*—*TT 9.9: SP 0.8: P 9.1: RC 2.8: D 0.1.* Refers to H. E. Babbitt, H. Cross, R. M. Knox, D. D. McGuire, R. W. Schmidt.

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(7) **BONNESS, JOSEPH DENNY**, 241 Eighteenth St., Milwaukee, Wis. (Age 31. Born Eau Claire, Wis.) 1922 C. E., Marquette Univ. *TT 4: P 4.*—1918 to 1919 Crew Chf., U. S. Army, Air Service.—1920 to 1922 (while student) Asst. to Prof., being Instructor in Mathematics, Marquette Univ. April to Dec. 1921 Inspector, Wisconsin Highway Comm., on concrete construction.—April 1922 to April 1928 Vice-Pres., Froemming Bros., Inc., Paving and Grading Contrs., Milwaukee, Wis., acted as Engr. and Supt. of concrete highway construction, had charge of highway contracts in Wisconsin and Pennsylvania, estimating, bidding, construction, executive work. *TT 5.8: P 5.8: RC 5.8.*—April 1928 to date in private practice as Paving Contr., at Milwaukee, from April to Dec. 1918 as member of firm, Bonness & Sprout, on paving and grading of city streets. *TT 0.9: P 0.9: RC 0.9.*—*TT 10.7: P 10.7: RC 6.7.* Refers to C. A. R. Distelhorst, R. W. Gamble, N. M. Isabella, E. L. Knebes, H. J. Kuelling.

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(7) **BRYDONE-JACK, HERBERT DISBROW**, Constr. Dept., Canadian Pacific Ry., Winnipeg, Man., Canada. (Age 40. Born Sandbach, Cheshire, England.) 1911 B. Sc. (Civ.) McGill Univ., Montreal, Que., Canada. *TT 4: P 4.*—Univ. vacations and May 1911 to Aug. 1914 with Canadian Pacific Ry. on surveys and (after May 1911) Asst. Engr. on construction and location of branch lines and main-line double-track construction, including steel and concrete bridges. *TT 3.3: P 3.3: RC 3.3.*—1914 to 1919 war service, overseas.—Aug. 1919 to March 1920 Testing Machine Operator and Computing Engr., Dept. of Interior, Forest Products Laboratory, Ottawa, Ont., Canada, testing strength of timber. *TT 0.6: P 0.6.*—Jan. 1921 to Sept. 1927 with Sydney E. Junkins Co., B. C. Ltd., until March 1925 as Supt. in charge of lining Connaught tunnel, then Asst. Supt. during construction of large concrete railroad pier at Vancouver, B. C. *TT 6.6: P 6.6: RC 6.6.*—March 1920 to date (except Jan. 1921 to Sept. 1927) with C. P. Ry., until Jan. 1921 as Asst. Engr. in charge of lining 5-mile Connaught Tunnel (under traffic), from Sept. 1927 to Sept. 1928 Res. Engr. on construction, including concrete and steel bridge over Red Deer River, Alberta, and since Sept. 1928 Asst. Engr. in charge of construction of large combined railroad and highway bridge over Saskatchewan River in Saskatchewan Prov. *TT 2.3: P 2.3: RC 2.3.*—*TT 16.8: P 16.8: RC 12.2.* Refers to E. E. Brydone-Jack, A. W. Earl, J. M. R. Fairbairn, J. R. C. Macredie, T. C. Macnabb, A. D. Wilder.

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(15) **CADE, KING CHARLIE**, 4138 Newton Ave., Dallas, Tex. (Age 36. Born Burkeville, Tex.) 1913 B. S. in Civ. Eng., Tex. Agri. and Mech. Coll. *TT 4: P 4.*—July 1913 to Sept. 1914 Instrumentman and Inspector, Calcasieu Parish Highway Dept., Lake Charles, La., location and cross-sections on about 12 miles of highways, also Concrete Inspector on small drainage structures. *TT 0.6: SP 0.6.*—Oct. 1914 to March 1917 Surveyor and Estimator (private work), surveying, timber estimating, land and tram road surveys, etc. *TT 1.3: SP 1.3.*—April 1917 to Dec. 1918 Asst. City Engr., Cleburne, Tex., supervising construction of street paving (about 2 miles), water mains (1 mile) and storm sewers (1 mile), design of storm sewer. *TT 1.7: P 1.7: RC 1: D 0.7.*—Jan. to Oct. 1919 Res. Engr. with Cock & Nagle, supervising construction of about 8 miles Federal Aid highway. *TT 0.8: P 0.8: RC 0.8.*—Nov. 1919 to March 1922 County Engr., Dickens County, Tex., in charge of plans and construction of 10 miles of Federal Aid highway. *TT 2.3: P 2.3: RC 2.3: D 2.3.*—April 1922 to July 1925 Asst. Engr., Williamson County, Tex., in charge of location and construction of about 25 miles of state highways. *TT 3.2: P 3.2: RC 3.2.*—Aug. 1925 to Sept. 1926 Res. Engr. with Koch & Fowler, Cons. Engrs., Dallas, Tex., supervising construction of sewer lines (8 miles), water mains (8 miles), disposal plant and earthen reservoir. *TT 1.1: P 1.1: RC 1.1.*—Sept. 1926 to April 1928 Asst. City Engr., University Park, Dallas, Tex., designing drainage structures and in charge of paving, water mains and sewer construction. *TT 1.5: P 1.5: RC 1: D 0.5.*—May 1928 to date Asst. Engr., State Highway Dept., in charge of highway location and construction (50 miles). *TT 0.8: P 0.8: RC 0.8.*—*TT 17.3: SP 1.9: P 15.4: RC 10.2: D 3.5.* Refers to E. Couch, J. D. Fowler, O. H. Koch, J. M. Nagle, R. B. Pearce, H. E. Spickard, C. L. Williford.

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(15) **CALVIN, ELMER BEN**, Throckmorton, Tex. (Age 27. Born Markley, Tex.) 1924 B. S., Tex. A. & M. Coll. *TT 4: P 4.*—June 1924 to Jan. 1928 Instrumentman and later Asst. Engr., Shackelford County, Tex., on highway plans and construction. *TT 3.1: SP 0.5: P 2.6: RC 1.8.*—Jan. 1928 to date Asst. Res. Engr., Texas State Highway Dept., on highway plans and construction. *TT 1.1: P 1.1: RC 1.1: D 0.7.*—*TT 8.2: SP 0.5: P 7.7: RC 2.9: D 0.7.* Refers to G. R. Johnston, H. S. Kerr, J. T. L. McNew, J. E. Pirie, J. J. Richey.

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(14) **CAMPEN, WILLIAM HERSHEY**, 6703 Minne Lusa Ave., Omaha, Nebr. (Age 32. Born Panama City, Panama.) 1919 B. S. in Chemistry, Univ. of Nebr. *TT 2: P 2.* June 1919 to June 1920 Testing Engr. of paving materials, City of Omaha, Nebr. *TT 1: P 1: RC 1.*—June 1920 to date operated testing laboratory in Omaha; has had charge, as Testing Engr., of bituminous and concrete paving projects, designed and supervised making of mixtures and did considerable specification writing; also did considerable research work on production and use of Platte River sand-gravel aggregates in concrete work. *TT 8.7: P 8.7: RC 8.7.*—*TT 11.7: P 11.7: RC 9.7.* Refers to J. A. Bruce, G. L. Campen, G. P. Dorsey, R. H. Findley, H. V. Knouse, E. M. Rohrbough, R. N. Towl, K. E. Vogel.

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(14) **CARLTON, ERNEST WILSON**, 1406 Rolla St., Rolla, Mo. (Age 31. Born Ft. Collins, Colo.) 1920 B. S. in Mech. Eng., and 1926 M. S. in Industrial Education, Colo. Agri. Coll. 1926 B. S. in Civ. Eng., Mo. School of Mines. *TT 4: P 4.*—Summers 1916–1918 Asst. to Repair Foreman, and Asst. Repair Foreman Great Western Sugar Co., Ft. Collins, Colo., overhauling mechanical equipment, rebuilding boiler-room, installing new main engine, repair of equipment and buildings, etc. Summer 1919 Rodman and Instrumentman on surveys, improvement work and office calculations, Eng. Staff, Ft. Collins. —June to Sept. 1920 Chf. of Party on surveying for O. P. Pennock, Asst. Prof. of Civ. Eng., Colorado Agricultural Coll. and Cons. Engr. *TT 0.2: P 0.2.*—Sept. 1920 to Sept. 1923 Instructor, Dept. of Applied Mechanics, Univ. of Nebraska, in charge of lecture and laboratory classes. *TT 3: P 3: RC 3.*—Sept. 1923 to date Asst. Prof., Missouri School of Mines, until Sept. 1927 in Dept. of Drawing, then in Dept. of Civ. Eng., in charge of lecture and laboratory classes. Summers with Dept. of Eng. and Public Works, Ft. Collins, Colo., Dept. of Eng., Ideal Cement Co. of Colo., on design of Boettcher (Colo.) Plant, Draftsman for Patent Attorney, Lincoln, Nebr., etc. *TT 5.5: P 5.5: RC 5.5.*—*TT 12.7: P 12.7: RC 3: D 5.5.* Refers to O. V. Adams, H. C. Beckman, J. B. Butler, C. M. Duff, M. I. Evinger, F. P. Goeder, E. G. Harris, C. E. Mickey.

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(1) **CASTILLO y CASSO, RAFAEL**, Valencia, Venezuela. (Age 40. Born Campeche, Campeche, Mexico.) 1911 Mil. Engr., Mil. Coll. of Chapultepec, Mexico City, Mexico. —1912 Asst. Engr. (Lieut.) supervising shop work, 1913–1914 Asst. Chemical Engr. (Second Capt.), analyzing explosives, Jan. to June 1915 Chf. Engr. (First Capt.), assisting with technical management, Aug. 1915 to March 1916 Asst. Mgr. (Civilian) in charge of shops and laboratories, and Jan. 1917 to April 1920 Gen. Mgr., all for National Cotton Powder Factory, Mexico City, Mexico; also Jan. to Nov. 1914 Prof. of Chemistry and Explosives, Chapultepec Military Coll., and Feb. 1919 to April 1920 Prof. of Applied Mechanics, Escuela de Industrias Quimicas, Tacuba, Mexico City. *TT 6.4: SP 1: P 5.4: RC 4.9.*—April to Dec. 1916 Chf. Engr. surveying Mexico City for military purposes. *TT 0.7: P 0.7: RC 0.7.*—Oct. 1922 to June 1925 Draftsman and Statistician, Sinclair Exploration Co., New York City, on topographic and geologic maps, study of subsoil structures and oil industry statistics. *TT 2.4: SP 0.8: P 1.6: RC 1.6.*—July 1925 to Aug. 1926 Draftsman, Gen. Drafting Co., New York City, computing and preparing maps. *TT 0.7: SP 0.4: P 0.3.*—Sept. 1926 to date Head Draftsman, Apure-Venezuela Petroleum Corporation, Valencia, Venezuela, in charge of computing and drafting rooms for oil-concession maps of Zamora and Apure, Venezuela. *TT 2.5: P 2.5: RC 2.5: D 2.5.*—*TT 12.7: SP 2.2: P 10.5: RC 9.7: D 2.5.* Refers to T. Human, Jr., B. Rasmussen. (Applies in accordance with Sec. 1, Art. I, of the By-Laws.)

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(8) **CATHER, LEROY HEYWOOD**, 507 East Evergreen St., Wheaton, Ill. (Age 31. Born Rockford, Ill.) Sept. 1915 to June 1916 student, Coll. of Eng., Univ. of Illinois. *TT 0.5: P 0.5.*—Oct. 1917 to Sept. 1918 Rodman and Draftsman, and Aug. 1919 to June 1921 Instrumentman and Draftsman, Oliver Iron Mining Co., Virginia, Minn. *TT 1.4: SP 1.4.*—Sept. to Nov. 1918 Student Officer, U. S. Coast Artillery, Ft. Monroe, Va. —Dec. 1918 to Aug. 1919 Draftsman, Armour Mech. Co., Stock Yards, Chicago, Ill. *TT 0.4: SP 0.4.*—June 1921 to Dec. 1922 Instrumentman and Draftsman, Minnesota State Highway Dept., Virginia, Minn. *TT 1.2: SP 0.2: P 1.*—Dec. 1922 to date Chf. of Staff, Kelker, DeLeuw & Co., Chicago,

until April 1923 being Asst. Engr. preparing report on transportation for Chicago, making charts and compiling data of surface line and rapid transit operation; then Res. Engr. on paving, sewer and water construction for Libertyville, Ill.; autumn 1923 in charge of central office and of design of all work, etc.; since autumn 1923 has had complete charge of office and construction work (about \$2 000 000 annually). *TT 6.2: P 6.2: RC 5.8: D 3.5.—TT 9.7: SP 2: P 7.7: RC 5.8: D 3.5.* Refers to C. E. DeLeuw, J. J. Kearney, R. F. Kelker, Jr., F. T. Mavis, H. G. Suehrstedt.

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(9) **CLEMENT, RALPH BYRON**, 18 Spirea Drive, Dayton, Ohio. (Age 44. Born Gloucester, Mass.) 1909 B. S., Dartmouth Coll. 1915 C. E., Univ. of Wis. *TT 4: P 4.—*June 1909 to March 1911 with Atlas Cement Co., Northampton Plant, as Rodman and Instrumentman on surveys, quarry work, Chf. Mill Inspector on construction of large storage tanks, installation of Bates packing machines, efficiency and operation inspection reports. *TT 0.9: SP 0.9.—*July to Sept. 1911 Rodman and Instrumentman, Stone & Webster Corporation, on surveys. *TT 0.1: SP 0.1.—*Sept. to Nov. 1911 Recorder, U. S. Geodetic Survey, Broad Sound, Boston Harbor. *TT 0.1: SP 0.1.—*Nov. 1911 to Feb. 1914 Chf. of Party, later Chf. Draftsman, Central N. H. Power Co., Brattleboro, Vt., on surveys, railroad relocation (20 miles), location of damsites; Chf. Engr. in charge of investigations, designing possible developments. *TT 2.2: P 2.2: RC 1.6.—*Feb. to Sept. 1914 and June to Aug. 1915 in private practice at Newport, N. H., made town map, constructed several private water-supply systems, entailing construction of small dams, reservoirs, deep wells and filtration beds. *TT 0.7: P 0.7: RC 0.7.—*Aug. 1915 to March 1920 Hydr. Engr., Miami Conservancy Dist., Dayton, on hydraulic computations, roads, damages and benefits from construction of flood-protection works, drafting; Office Engr., Dayton project, office detail for channel and levee improvements. *TT 4.6: P 4.6: RC 1.5: D 0.6.—*March 1920 to June 1924 various engagements on architecture and construction of buildings, Dayton. *TT 2.1: SP 2.1.—*June 1924 to date Chf. Engr. and Archt., Refiners Oil Co., Dayton, in charge of design and construction of oil-storage pumping systems, warehouses, service stations, retaining walls, spur tracks, etc. *TT 4.8: P 4.8: RC 4.8: D 2.2.—TT 19.5: SP 3.2: P 16.3: RC 8.7: D 2.8.* Refers to C. S. Bennett, C. A. Bock, C. H. Eiffert, R. Fletcher, D. W. Mead, C. H. Paul, H. L. Rogers.

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(1) **COLLINS, ERLE LEROY**, 769 St. Marks Ave., Brooklyn, N. Y. (Age 30. Born Pomona, Cal.) 1922 A. B. in Chem. Eng., and 1924 C. E., Stanford Univ. 1923 B. S. in San. Eng., Harvard Univ. *TT 4: P 4.—*Jan. to Oct. 1924 Structural Draftsman, Eng. Dept., Long Beach, Cal., checked plans for Bldg. Dept., wrote specifications for incinerator plant, analyzed bids and wrote reports. *TT 0.7: P 0.7.—*Oct. to Dec. 1924 Investigating Engr., Dept. of Public Works, Los Angeles, Cal., made investigations, surveys, tabulations and prepared report on quantities and sources of Los Angeles refuse. *TT 0.2: P 0.2: RC 0.2: D 0.2.—*Dec. 1924 to Jan. 1927 Pacific Coast Mgr., Hiler Eng. & Constr. Co., Inc., Brooklyn, N. Y., in charge of design, construction and sales of municipal refuse-disposal plants west of Rocky Mountains. *TT 2.1: P 2.1: RC 2.1: D 2.1.—*Jan. 1927 to date Chf. Engr., Brooklyn Ash Removal Co., Inc., designed, wrote specifications, received bids, awarded contracts and supervised construction of three refuse-incinerator plants (\$1 250 000 each); also supervises maintenance and operation of seventeen refuse-disposal plants; 1928 designed and installed equipment to convert 1 500-h.p. steam plant to electrical operation; designed and installed hydraulic ash-unloading system for land filling. June 1927 to Feb. 1928 also Cons. Engr., Ocean City, N. J., prepared plans and specifications for incinerator plant. *TT 2.2: P 2.2: RC 2.2: D 2.2. TT 9.2: P 9.2: RC 4.4: D 4.4.* Refers to E. A. Byrne, G. M. Fair, E. W. Firth, E. C. Goodwin, E. Leech, I. S. Osborn, R. W. Stewart, R. D. Van Alstine.

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(7) **CORTES, HENRY GASPAR**, 615 Monroe St., Ann Arbor, Mich. (Age 22. Born Bogota, Colombia.) 1928 C. E., Cornell Univ. *TT 4: P 4.—*Oct. 1928-Jan. 1929 Draftsman and Designer, Div. of Bridges, New Jersey State Highway Comm., 1 month on design of 75-ft. highway bridge, Dept. of Agriculture specifications. At present Graduate Student, Univ. of Michigan. *TT 0.3: SP 0.2: P 0.1: D 0.1.—TT 4.3: SP 0.2: P 4.1: D 0.1.* Refers to F. A. Barnes, E. N. Burrows, J. Perry, J. W. Simmons, Jr., L. C. Urquhart.

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(5) **CRAMER, WILLIAM AURELIUS WRENN**, 808 Ocean View Ave., Norfolk, Va. (Age 26. Born Suffolk, Va.) 1925 B. S. in Civ. Eng., Univ. of N. C. *TT 4: P 4.—*June 1925 to Aug. 1927 with J. G. Wilson Corporation, Norfolk, Va., as Draftsman on design of steel doors, in charge of electrically-operated doors, design and materials, responsible to Plant Mgr. on design and development of new type of automatic fire door. *TT 1.7: SP 0.7: P 1: RC 1: D 2.—*Aug. to Dec. 1927 Sales Engr., J. G. Wilson Corporation, Philadelphia, Pa. *TT 0.3:*

P 0.3.—Dec. 1927 to April 1928 various engineering work. *TT 0.3: P 0.3.* April 1928 to date Design Draftsman (Eng.). Public Works Dept., Hampton Roads Naval Operating Base, Norfolk, on design and drawings of sewer, water, steam and electric conduit systems, roads, etc., maps, estimates and specifications, designs and computations for design of steel and concrete construction, piers, retaining walls, etc. *TT 0.9: P 0.9: D 0.9.—TT 7.2: SP 0.7: P 6.5: RC 1: D 2.9.* Refers to W. H. Allen, L. F. Bellinger, G. M. Braune, T. F. Hickerson, H. F. Janda, T. Saville, P. K. Schuyler.

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(14) DANIEL, ISAAC CRAWFORD, Booneville, Ark. (Age 26. Born Washington, La.) 1927 B. C. E., La. State Univ. *TT 4: P 4.*—Sept. 1927 to date Inspector and Res. Engr., Bridge Dept., Arkansas State Highway Dept. *TT 1.5: P 1.5: RC 1.5.—TT 5.5: P 5.5: RC 1.5.* Refers to E. L. Erickson, N. B. Garver, R. C. Gibson, N. E. Lant, B. W. Pegues.

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(7) DARRELL, GEORGE CHARLES, 692 Endicott Bldg., St. Paul, Minn. (Age 34. Born Chicago, Ill.) 1917 B. S. in Arch. Eng., Univ. of Ill. *TT 4: P 4.*—June to Aug. 1917 Archt. Draftsman for Engr. of Bldgs., Illinois Central R. R. *TT 0.1: SP 0.1.*—Aug. 1917 to Feb. 1919 1st Lieut., Coast Artillery Reserve Corps, 3d Trench Mortar Battalion, American Expeditionary Forces.—March 1919 Archt. Draftsman for Asst. Engr. of Bldgs., Baltimore & Ohio R. R. April 1919 to May 1920 with M. J. Morehouse, Archt., 6 months as Archt. Draftsman in Chicago office, then Constr. Supt. on building for Postum Cereal Co., Battle Creek, Mich. *TT 0.9: SP 0.3: P 0.6: RC 0.6.*—May 1920 to Feb. 1923 with Grant Smith & Co., St. Paul, Minn., as Estimator and ($\frac{1}{2}$ year) Constr. Supt. *TT 1.6: SP 1.1: P 0.5: RC 0.5.*—Feb. 1923—Jan. 1925 and March 1925 to Feb. 1926 with H. A. Sullwold, Archt., Los Angeles, Cal., 6 months as Archt. Draftsman, 6 months Structural Engr. and remainder of time Constr. Supt. on St. Catherine's Chapel, St. Paul ($1\frac{1}{2}$ years) and on industrial buildings for Waldorf Paper Products Co. (5 months). *TT 2.6: SP 0.2: P 2.4: RC 2.4: D 0.5.*—Feb. 1925 and Feb. 1926 to March 1929 Structural Engr., Ellerbe & Co., Archts., St. Paul, on design of hospital in Clifton Springs, N. Y., Mayo Clinic, Rochester, Minn., Cleveland Clinic Hospital, etc. Sept. 1926 to Feb. 1927 and Sept. 1927 to May 1928 and Sept. 1928 to date also Instructor, Extension Div., Univ. of Minnesota, night classes in elementary structural steel design. *TT 3.2: P 3.2: RC 3.2: D 3.2.—TT 12.4: SP 1.7: P 10.7: RC 6.7: D 3.7.* Refers to W. N. Cary, J. B. Gilman, G. H. Herrold, W. E. King, H. D. Lovering, L. H. Sault.

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(15) DRURY, CLAIR FRED, 1509 $\frac{1}{2}$ West Seventeenth St., Oklahoma City, Okla. (Age 50. Born New Boston, Ill.) 1902 B. S., Univ. of Ill. *TT 2: P 2.*—1902 to 1904 with Frost & Granger, Archts., Chicago, Ill. *TT 0.7: SP 0.1: P 0.6.*—1904 to 1909 member of firm, Whitsitt & Drury, Archts., Moline, Ill., warehouse and industrial buildings, etc. *TT 6: P 6.*—1909 to 1915 not on engineering work. 1915 to 1917 Tri City Sales Mgr., Hydr. Pressed Brick Co., Davenport, Iowa.—1917 to 1919 with U. S. Housing Corporation, Davenport, in charge of materials for a housing project. *TT 1: SP 1.*—1919 to 1922 Gen. Contr. on construction.—1922 to 1923 with Claussen & Kruse, Archts., Davenport, on design of \$2 000 000 Masonic Temple. *TT 1: P 1: RC 1: D 1.*—1923 to 1925 with Cervin & Horn, Archts., Rock Island, Ill., in charge of construction of four large buildings, wrote specifications for office. *TT 2: P 2: RC 2: D 2.*—1925 to 1927 Head, Dept. of Architecture, Agricultural and Mechanical Coll., Stillwater, Okla. *TT 2: P 2: RC 2.*—1927 to date with Layton Hicks & Forsyth, Archts., Oklahoma City, in charge of drafting room operations and some outside construction. *TT 2: P 2: RC 2: D 2.—TT 16.7: SP 1.1: P 15.6: RC 7: D 5.* Refers to W. S. Bellows, L. S. Holmboe, B. S. Myers, W. E. Price, E. R. Stapley, C. J. Thiebaud.

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(7) EICHENHOFER, HERMAN JOHN, 92 Cedar St., Wyandotte, Mich. (Age 22. Born Utica, N. Y.) 1928 B. S. in C. E., Univ. of Mich. *TT 4: P 4.*—Summer 1926 Rodman, Eng. Dept., Utica, N. Y. Summer 1927 Jun. Asst. Civ. Engr., New York State Highway Dept.—June 1928 to Jan. 1929 Timekeeper and Constr. Engr., C. O. Barton Co. *TT 0.3: SP 0.1: P 0.2: RC 0.1.—TT 4.3: SP 0.2: P 4.2: RC 0.1.* Refers to C. O. Barton, W. S. Housel, R. L. Morrison, J. S. Worley.

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(1) ELLER, EDWIN CAMERON, 73 Pierpont St., Rahway, N. J. (Age 29. Born Buffalo, N. Y.) 1922 M. E., Rens. Pol. Inst. *TT 4: P 4.*—July 1922 to May 1924 with Bethlehem Steel Co., Lackawanna Plant, until April 1923 as Jun. Engr., Steam Eng. Dept., then Supervisor of Apprentices, in charge of organizing and running apprentice school, and after Sept. 1923 Final Inspector, Rail Mill No. 1, finishing end, rail and steel inspection. *TT 1.9:*

P 1.9: RC 0.4.—Nov. 1924 to date Jun. Engr. with Hazen & Whipple, New York City, on design and construction, sanitary engineering. TT 4.4: P 4.4: RC 2.5.—TT 10.3: P 10.3: RC 2.9. Refers to C. M. Everett, F. H. Hapgood, A. Hazen, M. Pirnie, H. H. Porter.

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(1) FAVA, ROBERT HUGH, 220 South Seventh St., Newark, N. J. (Age 29. Born Newark, N. J.) Licensed Archt., State of New Jersey. Studied Architecture, Columbia Univ. Extension. 1921 to 1923 with Estimating Dept., Rolo Constr. Co., Newark, N. J., working with Supt. in directing construction. TT 0.9: SP 0.9. 1923 to 1926 Architectural Draftsman with H. Rosensohn, Newark. TT 1.7: SP 1.7. 1926 to 1928 Chf. Draftsman and Designer with Rudolph Kruger, Newark, designed Clinton & Union Bldg., Irvington, N. J., 60 Branford Place Office Bldg., and No. 25 Thirteenth Ave. Office Bldg., Newark, and many one-family and apartment houses. TT 2.5: P 2.5. 1928 to date Supt. of Constr., Fatzler Constr. Co., Inc., Newark, on a theater, bank, creamery dairy, etc. TT 0.5: P 0.5. TT 5: SP 2.6: P 3. Refers to J. Frank, E. S. Rankin, S. Shaw, M. R. Sherrerd, J. R. Van Duyn.

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(15) FENSTERMAKER, ARTHUR, 1018 Travis Boulevard, San Antonio, Tex. (Age 27. Born San Antonio, Tex.) 1924 B. S. in Arch. Eng., Tex. Agri. and Mech. Coll. TT 4: P 4.—1924 to 1925 graduate student, Massachusetts Inst. of Technology. 1925 to 1928 Timekeeper and Material Clerk, L. T. Wright & Co., Gen. Contrs. TT 1: SP 1.—1928 to date Gen. Contr., The Fenstermaker Co., in charge of office and field operations. TT 1: P 1.—TT 6: SP 1: P 5. Refers to A. R. Alling, W. E. Simpson.

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(1) FISHER, HARRY BENJAMIN, 169 Joralemon St., Belleville, N. J. (Age 46. Born Philadelphia, Pa.) Completed Mech. and Structural Eng. courses, International Correspondence Schools. 1898 to 1902 Apprentice Pattern-maker, Tracer of drawings and Detail Draftsman with C. Lester and others. TT 2: SP 2.—1903 to 1904 Detail Draftsman, Lackawanna Steel Co., Buffalo, N. Y., on steel buildings and mill foundations for rolling-mills and blast-furnaces. TT 0.5: SP 0.5.—1904 to 1906 Checker, Milliken Bros. Steel Works, Staten Island, on steel buildings, mill foundations and mechanical equipment for rolling-mills. TT 2.2: P 2.2.—1906 to 1908 with Carlin Constr. Co., New York, as Chf. Draftsman and later Field Supt. on reconstruction of 2 000 ft. of Manhattan approach to Williamsburg Bridge. TT 1.2: P 1.2: RC 1.2.—1908 to 1910 Designer, one year with Public Service Comm. of New York on subway structures, then with Interborough Rapid Transit, New York City, on steel structures for elevated railroads. TT 2.8: P 2.8: D 2.8.—1910 to 1912 Chf. Draftsman, Brooklyn Edison Co., on boiler-houses, substation buildings and mechanical equipment. TT 2: P 2: RC 2.—1912 to 1915 Designer, Lidgerwood Mfg. Co., New York City on steel towers for cableways and steel traveling towers for logging. TT 2.8: P 2.8: D 2.8.—1915 to 1917 Field Supt., Tide Water Oil Co., Bayonne, N. J., on boiler-houses, gas-holders, oil stills, fire pump, fire-pipe lines and various steel and concrete buildings. TT 2: P 2: RC 2.—1917 to 1919 Supt. of machine shop, American Can Co., New York City, on manufacture of experimental models of automatic machines. TT 1.9: P 1.9: RC 1.9.—1919 to date with Robins Conveying Belt Co., New York City, as Designer and Estimator of materials-handling plants and buildings, also traveling bridges and towers for handling bulk materials by grab-buckets. TT 10: P 10: D 10.—TT 27.4: SP 2.5: P 24.9: RC 7.1: D 15.6. Refers to C. E. Conover, S. Dahm, W. L. Fewsmith, J. H. Quimby, J. W. Reid.

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(3) GARDNER, WILLIAM MCGREGOR, 313 Grosvenor Ave., Westmount, Que., Canada. (Age 32. Born Montreal, Que., Canada.) Prof. Engr., Province of Quebec.—1916 certificate in Mil. Eng., Canadian Govt. 1917 B. Sc., Faculty of Applied Sci., McGill Univ. TT 4: P 4.—Summer 1916 Gen. Designer and Draftsman, water-power studies and acetone plant, Shawinigan Water & Power Co. 1917 to 1919 Artillery Observer and Battery Commander's Asst. on location of gun positions, laying out firing lines, corrections and battery control. Canadian Govt. Service, overseas. TT 2: P 2.—1919 to date with Montreal Tramways Co. as follows: 1919 Field Engr. on street and track surveys and levels; 1919 to 1922 Trackwork Engr., designing layouts; 1922 to 1927 Engr. of Special Trackwork, supervising design, construction and maintenance of special trackwork, preparing reports, estimates, specifications and records of track construction; since 1927 Prin. Asst. to Engr. of Rapid Transit, collaborating in research and solution of traffic problems and projection of rapid transit routes and structures; 1927 to 1928 also member, Rail Corrugation Committee, Canadian Elec. Ry. Association, investigating problem of indulatory rail wear and rail specification. TT 9.7: P 9.7: RC 9.7: D 7.2.—TT 15.7: P 15.7: RC 9.7: D 7.2. Refers to J. L. Busfield, J. B. Challies, R. D. French, O. O. Lefebvre, H. M. MacKay, P. A. Seurot, J. C. Smith, T. K. Thomson.

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(10) **GREEN, ARTHUR**, 637 Locust St., Bristol, Tenn. (Age 40. Born Edwina, Tenn.) Certified Prof. Engr., States of Tennessee and Virginia. Sept. 1915 to May 1918 Rodman and Instrumentman, and Feb. 1919 to Dec. 1922 Instrumentman, Aluminum Co. of America, Alcoa, Tenn., on surveys, street location and grade, sewer, water line and reservoir construction, etc. *TT 2.7: SP 1.8: P 0.9.*—Jan. 1921 to Aug. 1922 Material and Time Checker, Maintenance Dept., Tubize Artificial Silk Co., Hopewell, Va., some estimating. *TT 0.8: SP 0.8.*—Sept. 1922 to July 1923 Instrumentman, City of Petersburg, Va., revising city map, sewer construction, various surveys, estimates for street improvement, pavement inspection, etc. *TT 0.9: P 0.9.*—Aug. to Dec. 1923 Res. Engr., Ambler Eng. Co., Richmond, Va., hydraulic power survey, field and office work, filtration plant construction, preliminary surveys for water-distribution system design, etc. *TT 0.4: P 0.4: RC 0.4.*—Jan. 1924 to date City Engr., Bristol, Tenn., on design, specifications and supervision of all engineering projects for city; Supt. of water-works. *TT 5.2: P 5.2: RC 5.2: D 5.2.*—*TT 10: SP 2.6: P 7.4: RC 5.6: D 5.2.* Refers to J. N. Ambler, G. M. Bassel, R. D. Budd, R. L. Morrison, A. R. Murphy, G. L. Oppen, G. M. Stone, M. P. Taylor.

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(1) **GREGG, CLARENCE MILTON**, 23 Dixon St., Tarrytown, N. Y. (Age 31. Born Princetown, N. Y.) 1923 B. S. in C. E., Union Coll. *TT 4: P 4.*—July 1923 to March 1924 Rodman, New York State Bridge and Tunnel Comm., also acted as Instrumentman, Chf. of Party and Office Computer, on Holland Tunnel construction. *TT 0.5: SP 0.3: P 0.2.*—March 1924 to date Instrumentman, New York Central R. R. Co., acted as Draftsman in Office of Div. Engr., Elec. Div.; work included surveying, track layout design and cost estimating. *TT 4.3: SP 0.8: P 3.5: RC 1.5: D 0.5.*—*TT 8.8: SP 1.1: P 7.7: RC 1.5: D 0.5.* Refers to C. S. Gleim, W. N. Hazen, H. A. Schauflier, Z. H. Sikes, N. T. F. Stadtfeld, W. C. Taylor.

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(11) **HARVEY, EUGENE COCHRANE**, 5022 Mt. Royal Drive, Los Angeles, Cal. (Age 33. Born Santa Fe, N. Mex.) 1920 B. S., and 1926 C. E., Univ. of Colo. *TT 4: P 4.*—Aug. to Dec. 1913 Recorder on survey, and May to Sept. 1919 Transitman, New Mexico Highway Dept. *TT 0.3: SP 0.3.*—April to Sept. 1914, June to Aug. 1916 and May to July 1917 Hydrographer with State of New Mexico. *TT 0.5: SP 0.5.*—Aug. 1917 to April 1919 with U. S. Army, Engr. Corps, finally as 1st Lieut., on transit and planetable work, running instrument (6 months), and construction of trenches, bombing courses, etc. (4 months), etc. *TT 0.6: SP 0.3: P 0.3: RC 0.3.*—June 1920 to June 1923 Instructor in Civ. Eng., Univ. of Colorado. *TT 1.5: SP 1.5.*—July to Nov. 1923 Draftsman and Designer of buildings, with O. G. Bowen, Los Angeles, Cal. *TT 0.3: SP 0.1: P 0.2: D 0.2.*—Nov. 1923 to April 1924 Estimator and Detailer of reinforcing steel, Badt-Falk Co., Los Angeles, Cal. *TT 0.2: SP 0.2.*—April 1924 to date with Bridge Dept., Los Angeles, until Oct. 1924 as Structural Engr., detailing, checking and estimating quantities in concrete bridges, then Asst. Chf. Structural Engr., designing, checking and in charge of design (under supervision of Engr. of Bridges and Structures) of concrete bridges and viaducts, such as Riverside Drive-Dayton Ave. Bridge, First St. viaduct and Fourth St. Viaduct (plans not completed) also designing and checking retaining walls for Street Design Div. *TT 4.4: SP 0.7: P 3.7: RC 3.5: D 2.5.*—*TT 11.8: SP 3.6: P 8.2: RC 3.8: D 2.7.* Refers to R. H. Bacon, M. Butler, I. C. Crawford, W. C. Hogoboom, R. W. Stewart, H. H. Winter.

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(1) **HAVIG, IVAR**, 92 Columbia Heights, Brooklyn, N. Y. (Age 33. Born Oslo, Norway.) 1918 C. E., Norwegian Govt. Inst. Tech., Trondhjem, Norway. *TT 4: P 4.*—Special course in theory of mechanics, Royal Norwegian Univ., Oslo, Norway—Aug. 1918 to Jan. 1922 Asst. Engr., Norwegian Govt. R. Rs., on structural steel and concrete, detailing and designing. *TT 3.5: P 3.5: D 1.5.*—Jan. 1922 to Sept. 1924 Asst. (Instructor and Prof.'s Asst.), Norwegian Govt. Inst. of Technology, bridge building and statics. *TT 2.3: SP 0.3: P 2: RC 1.5: D 1.5.*—Nov. 1924 to June 1927 Asst. Norwegian Govt. Patent Office, engineering literature and patent specifications; Acting Librarian supervising move. *TT 1.2: SP 1.2: D 1.2.*—Sept. 1927 to date Asst., Columbia Univ. Medical Library, being Readers' Adviser, Library Asst., in charge of stacks, etc.—*TT 11: SP 1.5: P 9.5: RC 1.5: D 4.2.* Refers to A. P. Andersen, H. C. Borchgrevink, E. D. Meyer, H. H. Rode, G. H. Vedeler.

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(4) **HEINE, FRANCIS ADOLPH**, 25 North Eleventh St., Reading, Pa. (Age 31. Born Reading, Pa.) 1928 C. E., Pa. State Coll. *TT 4: P 4.*—June 1915 to Nov. 1916 Rodman, Tracer and Draftsman, Carpenter Steel Co., Reading, Pa., steel-plant construction. *TT 0.7: SP 0.7.*—Nov. 1916 to May 1917 Draftsman and Tracer, Luster-Jordan Co., Norristown, Pa. *TT 0.2: SP 0.2.*—May 1917 to Dec. 1918 Instrumentman, Alan Wood Iron & Steel Co.

Conshohocken, Pa., on construction of three open-hearth furnaces and appurtenances, machine shop, additions to trackage, etc. *TT 0.8: SP 0.8.*—Dec. 1918 to April 1919 Surveyor and Draftsman with Fritz Ehrsam, Archt., Reading; estate improvement; road construction; Engr. on construction of 1 800 ft. of city streets. *TT 0.3: SP 0.1: P 0.2: D 0.1.*—April to Dec. 1919 Asst. to Chf. Engr., Schuylkill Ry. Co., Girardville, Pa., being Asst. Engr. on maintenance of 78 miles, Inspector on construction of convertor and control apparatus building, made surveys and plans for 3 miles of proposed electric railway. *TT 0.7: P 0.7: RC 0.1: D 0.2.*—Dec. 1919 to Oct. 1922 with Navy Dept., until Dec. 1920 as Surveyor in Philadelphia, Washington and other cities, then Surveyor-in-Chg., Navy Mine Depot, Yorktown, Va., being Engr. on location and construction of $9\frac{1}{2}$ miles of railroad, Co-Designer of drinking-water, fire-protection and sanitary-sewer systems, surveys, layouts for station activities, etc. *TT 2.8: P 2.8: RC 1.5: D 1.*—Oct. 1922 to date Engr. of Surveys, Bureau of Water, Reading, on surveys for impounding and distributing reservoirs, plans, papers and reports for land condemnation proceedings, engineering for laying of supply mains and river crossings, final estimates on construction (\$800 000), etc. *TT 5.8: SP 0.5: P 5.3: RC 3.3: D 1.8.*—*TT 15.3: SP 2.3: P 13: RC 4.9: D 3.1.* Refers to C. L. B. Anderson, W. I. Klein, E. L. Nuebling, A. R. O'Reilly, J. P. Sartz, G. F. Wieghardt.

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(12) **HOWARD, BERNE MARTIN**, 973 Multnomah St., Portland, Ore. (Age 42. Born Fremont, Nebr.) 1909 B. Sc. C. E., Nebr. Univ. *TT 4: P 4.*—June 1909 to March 1910 Transltman, J. G. White & Co., Richfield, Idaho, on location and construction of irrigation canals and structures. *TT 0.4: SP 0.4.*—March 1910 to Sept. 1911 Asst. Engr. on location and construction of canals and irrigation works for Jas. A. Green & Co. on Willow River Land and Co. project at Brogan, Ore. *TT 1.5: P 1.5: RC 1.5.*—Sept. to Dec. 1911 Transltman, Idaho-Oregon Power Co., on electric-railway location, Boise, Idaho; Dec. 1911 to Aug. 1912 Asst. Engr. on irrigation surveys and reports, working out of Boise. *TT 0.8: SP 0.1: P 0.7: RC 0.7.*—Aug. 1912 to date with Spokane, Portland & Seattle Ry. System, as follows: Aug. 1912 to April 1913 Inspector on concrete and steel bridge construction; April 1913 to Oct. 1916 Bridge Draftsman on design of bridges and structures; since Oct. 1916 on design, construction and maintenance of bridges and structures, until June 1917 as Asst. Bridge Engr., then Bridge Engr. in charge. *TT 16.2: SP 0.3: P 15.9: RC 12.3: D 15.9.*—*TT 22.9: SP 0.8: P 22.1: RC 14.6: D 15.9.* Refers to W. E. Burkhalter, M. F. Clements, S. D. Clinton, W. Gerig, R. F. Hoffmark, C. H. Purcell, C. W. Raynor, C. K. Smith, C. F. Thomas, R. B. Wright.

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(10) **HOWELL, HUBERT GENTRY**, City Engr.'s Office, Jackson, Miss. (Age 34. Born Crystal Springs, Miss.) Sept. 1914 to May 1918 Student in electrical engineering, Mississippi Agricultural and Mechanical Coll. *TT 1.5: P 1.5.*—May 1918 to Aug. 1919 with International Ship Building Co., Pascagoula, Miss., until July 1918 as Steel Ship Draftsman, Hull Div., then Hull Designer, preparing lines, hull design and layout, Dec. 1918 to March 1919 Loftman in charge of mold loft steel ship layout, and after March 1919 Production Engr. in charge of Progress and Production Dept. *TT 1.3: SP 0.3: P 1: RC 1: D 0.2.*—Aug. 1919 to Sept. 1922 and Dec. 1926 to May 1927 with J. F. Coleman Eng. Co., New Orleans, La., as Supt., International Ship Bldg. Co., in liquidation in charge of dismantling, preparing inventory, wrecking operation, water lights, sewerage, etc., and (after Dec. 1926) Res. Engr. for Company, in complete charge of Pine Hills development project at Pass Christian, Miss., sidewalk, curb and gutter, sanitary and storm sewerage, streets, water, bridges, drainage, etc. *TT 3.6: P 3.6: RC 3.6: D 0.1.*—Sept. 1922 to Sept. 1925 with New Orleans Great Northern R. R., Bogalusa, as Chf. Draftsman and designing, Mech. Dept. locomotive, car, machinery and building design, Inspector new rolling stock, etc. *TT 3: P 3: RC 3: D 3.*—Sept. 1925 to June 1926 Instructor of Mech. Drawing, Brookhaven (Miss.) High School. June to Aug. 1926 Asst. Res. Engr., Gulf Hills Development, Ocean Springs, Miss., in charge of surveys, golf-course layout, drainage, dredging operations, road construction, landscaping and designing. *TT 0.2: P 0.2: RC 0.2: D 0.1.*—Aug. to Dec. 1926 in private practice of architectural and civil engineering, Ocean Springs, surveys, drainage, golf-course construction, water systems, landscaping, etc. *TT 0.4: P 0.4: RC 0.4: D 0.2.*—May to Aug. 1927 Designing Engr., City of Biloxi, Miss. *TT 0.3: SP 0.1: P 0.2: RC 0.1: D 0.1.*—Dec. 1927 to date Designing and Constr. Engr., City of Jackson, Miss., on design and construction of drainage relief, municipal stadium, incinerator, etc. *TT 1.1: SP 0.2: P 0.9: RC 0.9: D 0.6.*—*TT 11.4: SP 0.6: P 10.8: RC 9.2: D 4.3.* Refers to E. Abbott, Jr., J. F. Coleman, H. M. Gallagher, T. G. Gladney, E. S. Stansel.

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(3) **HOYER, YNGVAR**, 94 Montgomery St., Newburgh, N. Y. (Age 31. Born Trondhjem, Norway.) 1921 C. E., Norway Tech. Inst., Trondhjem, Norway. *TT 4: P 4.*—Nov. 1915 to March 1916 Tracer, A/S. Hoyer-Ellefsen, Cons. Engrs., Oslo, Norway. Summer 1918

Surveyor, A/S. Sydvaranger-Min. Co., Kirkenes, Norway, stadia survey, plotting, suburban-town planning. July to Sept. 1921 Draftsman, Loussavaara Kirunavaara A/B. Min. Co., Narvik, Norway, on design of reinforced concrete structures and docks. *TT 0.2: P 0.2.*—Sept. 1921 to Feb. 1925 with Norwegian Public R. R., Narvik Dist., until June 1924 as Asst. Engr. on construction of reinforced concrete bridge foundations, high-tension lines, etc., and in office on alteration of steel and wood structures, sewer systems, hydro power plant layout, estimating and city planning, and after June 1924 Designer in charge of reinforced concrete structures, concrete highway bridges, crossing eliminations, layouts, tunnel Gunite arches, housing plans and architectural work. *TT 3.5: P 3.5: RC 0.7: D 0.7.*—April 1925 to May 1927 with American Gas & Elec. Co., New York City, until July 1925 as Draftsman on structural steel, mostly coal-handling equipment, then Constr. and Structural Engr. at Stanton Power Plant, Pittston, Pa., on steel erection, machinery setting, conveyor systems, high-tension yards, railroading, designing reinforced concrete slab bridges, retaining walls, culverts, sketching and progress reports, and after Feb. 1926 Cost Engr. in charge of Cost Dept., on estimating, calculations, unit costs, comparison studies, financial reports, etc.; also 1923 (1 month) member of Den Norske Ingeniørforening, studying hydro-power development and construction methods in Switzerland; 1924 member of Committee on Better Homes, and Committee for preparing and collecting data for new city planning (appointed by City of Narvik). *TT 1.9: P 1.9: RC 1.2.*—Aug. 1927 to date Structural Engr., New York Trap Rock Corporation, Newburgh, N. Y., concrete design, crusher pit, foundations, bridge abutments, concrete tunnels, wood and steel structures, conveyors, machinery, surveying and layouts, appraisal of industrial plants and buildings. *TT 1.5: P 1.5.—TT 11.2: P 11.2: RC 1.9: D 0.7.* Refers to B. Arneberg, A. Brandtzaeg, A. Gundersen, E. L. Heidenreich, Jr., E. S. Wright.

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(1) **IMER, OCTAVE WILLIAM**, 76 Rumsey Rd., Yonkers, N. Y. (Age 33. Born Uster, Zurich, Switzerland.) Licensed Prof. Engr., New York State.—1920 C. E., Swiss Federal Inst. Tech., Zurich, Switzerland. *TT 4: P 4.*—July to Aug. 1920 and Sept. to Dec. 1923 Asst. to A. Rohn, Prof. of Statics and Bridge Constr. and (1923) Dean, Swiss Federal Inst. of Technology. *TT 0.5: P 0.5.*—Sept. to Dec. 1920 Engr. with H. Bertschinger, Cons. Engr., Zurich, on check of hydro power plant, Waeggital, Switzerland. *TT 0.3: P 0.3.*—Jan. to April 1921 City Planning Engr., with Rittmeyer & Furrer, Archts., Winterthur, on layout for development of community of Waedenswil. *TT 0.3: P 0.3: RC 0.3.*—May to Dec. 1921 Asst. Engr., Limousin & Co., Engrs. and Contrs., Paris, France, on design and supervision of industrial plants, airship halls and bridges. *TT 0.7: P 0.7: RC 0.4.*—March 1922 to July 1923 with Siemens-Bauunion, Berlin, Germany, until Oct. 1922 as Chf. Engr., Concrete Dept., on industrial plants and airship-hall foundations, then Investigator and Representative Engr. in foreign countries, water-power plants in Turkey and Belgium. *TT 1.3: P 1.3: RC 1.3.* July and Aug. 1923 Engr. with E. Rathgeb, Cons. Engr., Zurich, on design of concrete arch bridge over Hundwillertobelbruecke. *TT 0.2: P 0.2: RC 0.2.* Feb. to April 1924 Designer and Checker, Elec. Bond & Share Co., Hydr. Dept., New York City, South Carolina and Wallenpaupack, Pa., plants. *TT 0.2: P 0.2: D 0.2.*—April 1924–June 1927 Designing Engr. for Cons. Engr. firms in New York City, until April 1925 with Purdy & Henderson, on schoolhouses, hospitals, theatre and plant store, then with Weinberger & Weischoff, Inc., on twenty theatres, being in full charge on eight, and after April 1926 with Lange & Noska, Inc., windbracing, etc. on tall buildings (up to 40 stories) and Designer in charge of Riverside Baptist Church. *TT 3.2: P 3.2: RC 1.7: D 1.5.*—July 1927 to Jan. 1928 Bridge Engr. with Ford, Bacon & Davis, Inc., Engrs., New York City, on check of Mississippi River bridge at Cairo, Ill., Pontchartrain Bridge, International Bridge, Brownsville and others. *TT 0.6: P 0.6: RC 0.6.* Feb. to Dec. 1928 Engr., F. L. Smidth & Co., Engrs., New York City, on structural design of crusher plant for Olympic Portland Cement Co. *TT 0.8: P 0.8: RC 0.8.*—Jan. 1929 to date Asst. Engr., New York Central R. R. Co., Eng. Dept., on grain elevator, Weehawken, cell retaining wall, 66th St., Storehouse, Kingsbridge. *TT 0.2: P 0.2: RC 0.2: D 0.2.—TT 12.5: P 12.5: RC 5.7: D 2.* Refers to E. E. Halmos, E. H. Harder, K. E. Hilgard, C. J. Laube, O. E. Mogenssen, N. A. Richards.

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(13) **JENNINGS, LOUIS JAMES**, 1516 Beverly Pl., Albany, Cal. (Age 32. Born Los Angeles, Cal.) 1923 B. S., Coll. of Civ. Eng., Univ. of Cal. *TT 4: P 4.*—Sept. 1923 to July 1924 Asst. Engr. for C. Derleth, Jr., on surveys, building design and Asst. on bridge work. *TT 0.8: P 0.8.*—July 1924 to date with American Toll Bridge Co., on Carquinez Bridge, until Nov. 1926 as Asst. Engr. on inspection of foundations and superstructure, in charge of field engineers on foundations, surveys, including pier locations and assistant charge of office engineers, Nov. 1926 to July 1927 Asst. Res. Engr., assistant charge of field and office engineers, bridge superstructure, bridge pavement, power-wire installation, checking stress

calculations, suspended span raising, bridge lighting, pier riprap, and since July 1927 Res. Engr. on completion of project, temporary and permanent pier protection, plant design for riprap, riprap placement, pier protection at Antioch bridge. *TT 4.7: P 4.7: RC 3.4: D 0.7.*—*TT 9.5: P 9.5: RC 3.4: D 0.7.* Refers to G. J. Calder, R. E. Davis, C. Derleth, Jr., D. H. Duncanson, E. J. Schneider, H. E. Squire, F. E. Washburn.

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(1) **JOST, CHARLES FREDERIC**, 894 Park Ave., Woodcliff, N. J. (Age 25. Born New York City.) B. S., and 1927 C. E., Thayer School of C. E., Dartmouth Coll. *TT 4: P 4.*—May 1927 to date June Engr. with Hazen & Whipple, New York City, on design of waterworks structures, valuations, reports, investigations, etc. *TT 1.9: P 1.9.—TT 5.9: P 5.9.* Refers to C. M. Everett, F. H. Hapgood, A. Hazen, A. P. Loriot, R. R. Marsden, M. Pirnie, H. G. Porter.

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(6) **JUPENLAZ, WILFRED**, 241 Lavina Ave., South Hills, Pittsburgh, Pa. (Age 30. Born Blossburg, Pa.) 1921 B. S. in Civ. Eng., Pa. State Coll. *TT 4: P 4.*—May 1917 to May 1919 with 15th Engrs, U. S. Army, 1½ years as Instrumentman on surveys in France. *TT 0.6: SP 0.6.*—Feb. 1921 to March 1923 Chf. of Party, Pennsylvania State Highway Dept., on location. *TT 2.1: P 2.1: RC 2.1.*—March 1923 to date Asst. Engr. with Morris Knowles, Inc., on investigations, reports and designs, water-supply, sewerage and city-planning projects. *TT 6: P 6: RC 4.5: D 3.—TT 12.7: SP 0.6: P 12.1: RC 6.6: D 3.* Refers to F. C. Foote, N. B. Jacobs, M. G. Mansfield, J. S. Ritchey, E. S. Taub, E. D. Walker.

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(6) **KNABE, MARTIN CHRISTOPHER**, 3d, 816 Fourteenth Ave., Moore, Pa. (Age 27. Born Norwood, Pa.) 1925 B. S. in C. E., Univ. of Pa. *TT 4: P 4.*—June 1925 to date with McClintic-Marshall Co., Pittsburgh, Pa., as follows: June 1925 to Dec. 1926 Draftsman and Shop Inspector, Pottstown Plant; Dec. 1926 to Feb. 1927 estimating and designing, Pittsburgh Office; Feb. to May 1927 on office and field investigation of girder viaducts, Pittsburgh & West Virginia R. R.; May to Oct. 1927 Timekeeper and Asst. Engr. on erection of Outer-bridge Crossing, Tottenville, N. Y.; Oct. 1927 to May 1928 designing erection equipment for Detroit River Bridge; May to Oct. 1928 Field Engr. on substructure, Kanawha Falls Bridge Co.; since Oct. 1928 investigating costs and designing toll bridges. *TT 3.1: SP 0.5: P 2.6: RC 1.5.—TT 7.1: SP 0.5: P 6.6: RC 1.5.* Refers to J. I. Copp, P. A. Franklin, J. Jones, G. L. Taylor, F. P. Witmer.

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(12) **LAZENBY, FREDERIC ARTHUR**, 3980 Seventeenth Ave. West, Vancouver, B. C., Canada. (Age 26. Born Port Hammond, B. C., Canada.) 1925 B. A. Sc. in C. E., Univ. of B. C. *TT 4: P 4.*—April to Dec. 1926 with Bridge River Power Co., until July as Instrumentman, being Levelman, mapping, computations, then Instrumentman and Res. Engr. on foundation investigation for dam, operating and supervising soil-bearing tests, drilling and boring. *TT 0.5: SP 0.1: P 0.4.*—May to Dec. 1925 and Dec. 1926 to date with British Columbia Elec. Ry. Co., Ltd., as Asst. to Res. Engr. on earth fill dam construction, acting as Rodman, Chainman, on layout of work, estimating, etc., and (since Dec. 1926) Draftsman, drafting, detailing, elementary design of hydro-electric and similar structures. *TT 2.6: SP 0.3: P 2.3.—TT 7.1: SP 0.4: P 6.7.* Refers to C. E. Blee, E. E. Carpenter, R. S. Carrick, S. P. Wing.

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(1) **LENDOR, ANTONIO**, Avenida Capotillo, Santo Domingo City, Dominican Republic. (Age 50. Born Curacao, Dutch West Indies.) 1913 completed course in topography, International Correspondence School. Nov. 1905 to Dec. 1907 Supt. of Bldgs., City of Santo Domingo. *TT 1.1: SP 1.1.*—Jan. 1914 to Sept. 1917 member of firm, Alfonseca & Lendor, Contrs., on construction of highway on Carretera Duarte (16 km.) and Carretera Mella (12 km.), erection of steel highway bridges over Camu, Licey and Verdo Rivers, and drainage, waterbound and bituminous macadam for Town of San Pedro de Macoris. *TT 3.8: P 3.8: RC 3.8.*—Jan. 1908 to Dec. 1913 and Oct. 1917 to date with Dept. of Public Works, Dominican Republic, as follows: 1908–1910 Supt. of highway construction, waterbound and concrete roads, reinforced concrete culverts, layout of work, cross-sectioning and location changes; 1911–1912 Asst. Engr. of highway construction, layout and construction of waterbound macadam, culverts, Inspector on steel highway bridge contracts, and Chf. of Party on location of highway (90 km.); 1913 Asst. to Dist. Engr., Santiago, on construction and maintenance of highways and bridges; Oct. 1917 to Oct. 1918 Asst. Engr. on highway construction; Nov. 1918 to June 1922 Engr. in charge of highway maintenance and (after Jan. 1922) of construction; July 1922 to May 1926 Res. Engr. on highway construction and maintenance; June to Dec. 1926 Inspector of highway bridges; since Jan. 1927 Res. Engr. on construction of bituminous macadam pavements for Towns of Puerta Plata, Santiago and San Francisco.

TT 16.9: SP 0.5: P 16.4: RC 16.4: D 3.9. TT 21.8: SP 1.6: P 20.2: RC 21.2: D 3.9. Refers to J. M. Adams, W. I. Baucus, J. H. Caton, 3d, M. A. Cocco, A. L. Harris, G. S. Rinehart, N. A. Swan, L. H. Walker.

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(1) **LENGYEL, STEPHEN.** 874 Broadway, New York City. (Age 33. Born Maramaros Ziget, Hungary.) Feb. 1911 to date with Henry Atterbury Smith, Archt., New York City, from 1912 to 1920 as Chf. Engr. and Archt., and at present Managing Director, Acting Treas. and Asst. Secy.; until 1920 being Draftsman, Designer and Constr. Supt. on private residences, high-school, reinforced concrete factory and apartment houses, then had charge (with sub contractors) of design and erection of buildings, including Cathedral Ayrcoourt (sub-contracts \$750 000) New York City (1922) La Mesa Verde Apartments (\$1 050 000), Jackson Heights (1926), etc. *TT 14: SP 3: P 11: RC 5: D 6.* Refers to J. A. Lewis, R. P. Miller, S. O. Miller, A. Smith, H. A. Smith.

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(1) **LYNCH, JAMES HENRY, Jr.,** P. O. Box 485, Haskell, N. J. (Age 32. Born Corning, N. Y.) Prof. Engr. and Land Surveyor, State of New Jersey. 1919 C. E., Cornell Univ. *TT 4: P 4.*—July 1919 to July 1925 with Erie R. R. Co. as follows: July to Dec. 1919 Asst. Sec. Foreman at Buffalo, N. Y., being Asst. in charge of track construction and maintenance; Dec. 1919 to March 1920 and April 1921 to Sept. 1923 Chf. of Corps at Buffalo and Rochester, N. Y., and Susquehanna, Pa., in charge of Div. Corps (field and office) directing and supervising plans, estimates and designs for maintenance-of-way; March 1920–March 1921 Office Engr. at Hornell, N. Y., responsible for checking of plans and estimates of four division corps, and in charge of special plans, estimates and designs by Regional Engr.'s office; after Sept. 1923 Asst. Div. Engr. at Jersey City, being second in charge of division track, signal and bridge and building forces, responsible for preparation of specifications and contracts for construction and maintenance-of-way work; supervision over Engr. Corps. *TT 5.8: SP 0.2: P 5.6: RC 5.6: D 5.6.*—July 1925 to date Asst. Engr., North Jersey Dist. Water-Supply Comm., Wanaque, N. J., in charge of field office and construction contracts for 7½ miles of highway and relocation of pumping stations (completed) and for 4½ miles of steel aqueduct (under construction). *TT 3.6: P 3.6: RC 3.6.*—*TT 13.4: SP 0.2: P 13.2: RC 9.2: D 5.6.* Refers to F. A. Barnes, C. J. Craigmile, J. E. Garratt, R. Gray, N. C. Holdredge, A. H. Pratt.

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(1) **LYONS, WILLIAM THEODORE,** 3671 Broadway, New York City. (Age 26. Born New York City.) 1924 B. S. M. E., Coll. of City of N. Y. *TT 4: P 4.* July to Sept. 1924 Transitman, Title Guarantee & Trust Co., New York City. *TT 0.1: SP 0.1.* Sept. 1924 to Feb. 1926 Timekeeper, Transitman and Estimator, Geo. Colon & Co., Contrs., New York City, on hotels, theatres, lofts and apartments, etc. *TT 0.7: SP 0.7.* Feb. 1926 to Feb. 1927 Supt. of Constr., John K. Turton & Co., Bldrs., New York City, on 15-story apartment structure. *TT 1: P 1: RC 0.8.* Feb. to Nov. 1927 Archt.'s Supt. and Representative, Thos. W. Lamb, Archt., New York City, supervising construction of two 2500-seat theatres and a 15-story apartment. *TT 0.8: P 0.8: RC 0.8.* Nov. 1927–Oct. 1928 Chf. Engr., R. W. Hebard & Co., New York City, being Asst. to Supt. of Constr. on \$300 000 Panama City (Panama) branch of National City Bank of New York. *TT 1: P 1: RC 1.* Nov. 1928 to date Supt. of Constr., Delta Constr. Co., New York City, in charge of garage construction (\$100 000). *TT 0.2: P 0.2: RC 0.2.* *TT 7.8: SP 0.8: P 7: RC 2.8.* Refers to H. B. Gates, C. MacCallum, F. O. X. McLoughlin.

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(2) **MCCULLY, COLEMAN CLYDE,** 33 Ashmont St., Dorchester, Mass. (Age 35. Born Clinton, Mass.) 1909 to 1913 student, Worcester Polytechnic Inst. *TT 1.5: P 1.5.*—May to Dec. 1913 and July 1914–June 1917 with Erie R. R. Co. as follows: May–Dec. 1913 Inspector, Leveler, Transitman, Chf. of Survey Party, etc., on construction; July 1914–Jan. 1916 Estimator, Eng. Dept., on design, cost estimates and supervision of construction of yards, bridges, ore docks, industrial layouts, etc.; Feb.–April 1916 Draftsman on design of structures; after May 1916 Asst. Engr., acting as Office Engr. for Dist. Engr. (district, 250 miles); office supervised construction of 37 miles grade reduction and second track, a float bridge and yard, numerous other bridges, etc. *TT 2.2: SP 1.2: P 1: RC 0.8: D 0.2.*—Jan. to July 1914 Asst. Supt., John Marsch Co., Contrs., in charge of sand banks and stone crushers for making concrete aggregates and responsible for assignment and delivery of aggregates, Southern New England R. R. *TT 0.5: SP 0.1: P 0.2: RC 0.2.*—July–Aug. 1917 Engr., J. F. Casey Co., Contrs., supervising construction of third and fourth tracking, Pennsylvania R. R., Alliance, Ohio. *TT 0.2: P 0.2: RC 0.2.*—Sept. to Dec. 1917 Field Office Mgr., Fred R. Jones Co., Contrs., on maintenance and construction for Baltimore & Ohio R. R., Garrett, Ind. *TT 0.3: P 0.3: RC 0.3.*—Dec. 1917 to July 1920 2d Lieut., Air Service, Aeronautics, U. S. Army, and with American Red Cross in post-war work.—July 1920–April 1927 Leading Draftsman and Asst. Engr., Boston & Maine R. R., on studies, estimates,

designs, economics and writing reports, specifications, etc., covering elimination of grade crossings, engine and freight terminals, etc.; Dept. Representative at Public Service Comm. and other hearings. *TT 5.4: SP 1.4: P 4: RC 2: D 2.*—May 1927 to date Asst. Engr., Metropolitan Dist. Water Supply Comm., Boston, Mass., being Asst. in charge of construction of pipe lines and appurtenances (9 months), and designing water supply tunnel intake and other facilities (over 1 year). *TT 1.8: P 1.8: RC 0.7: D 1.*—*TT 11.7: SP 2.7: P 9: RC 4.2: D 3.2.* Refers to C. R. Hughes, P. Jones, K. R. Kennison, F. C. Shepherd, C. H. Splitstone, F. E. Winsor.

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(5) **MASSEY, GEORGE HUBARD**, 328 Dickson Bldg., Norfolk, Va. (Age 36. Born Berkeley, Va.) Completed course in Surveying and Mapping and Civ. Eng., International Correspondence Schools. Aug. 1909 to Jan. 1910 and Aug. 1910 to Feb. 1911 Chairman with S. F. Day and other engineers on surveying. *TT 0.4: SP 0.4.*—Jan. to May 1910 and Feb. to Sept. 1911 Chairman, and May to Aug. 1910 Inspector on paving, City of Norfolk. *TT 0.6: SP 0.6.* Nov. 1911 to June 1912 Leveler, and Jan. 1915 to Dec. 1916 Draftsman, and later Asst. Engr. on Maintenance, Norfolk Southern R. R. *TT 1.7: SP 0.8: P 0.9: RC 0.9: D 0.3.*—June to Nov. 1912 Land Surveyor, and Feb. 1913 to March 1914 member of firm, Bonney & Massey, Civ. Engrs., on surveying, subdivision development. *TT 0.9: SP 0.6: P 0.3: RC 0.3.*—Nov. 1912 to Feb. 1913 Transitman, East Virginia & Carolina R. R. *TT 0.1: SP 0.1.*—March to Oct. 1914 Chf. of Party with Horner Peace & McCain, on 8 000-acre farm development. *TT 0.6: P 0.6: RC 0.6: D 0.2.*—Oct. 1914 to Jan. 1915 Chf. of Party, Currituck & Dare R. R., on location. *TT 0.2: P 0.2: RC 0.2.*—Dec. 1916 to date in private practice, as G. Hubbard Massey, Civ. Engr., until Dec. 1920 as Civ. Engr. on title surveying, industrial railroad tracks, subdivision development and factory layouts, and since then Cons. Engr., promoting, designing, arranging financial setup and supervising construction in Virginia, principal projects being street paving, sewage-disposal and sanitary-sewerage system, South Norfolk, street paving and storm sewers, Cape Charles, water-filtration and sewage-treatment plants and sanitary-sewerage systems, Warrenton, sea wall and boardwalk, Virginia Beach, South Branch and Portsmouth Nansemond Bridge highways, N. P. and P. N. Bridge Corporations, etc., (total cost of projects named over \$1 400 000). *TT 13.2: P 13.2: RC 13.2: D 13.2.*—*TT 17.8: SP 2.6: P 15.2: RC 15.2: D 13.7.* Refers to M. J. Caples, L. O. Hines, F. L. Nicholson, R. S. Royer, W. H. Taylor.

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(4) **MILLER, HARRY HERSHEY**, 517 Pine St., Steelton, Pa. (Age 37. Born Harrisburg, Pa.) Completed course in Highway Eng., Dept. of Eng. Extension, Pennsylvania State Coll. (1922) and course in Mech. and Eng. Drawing, Dept. of Eng., United Y. M. C. A. Schools, New York (1924).—June to Nov. 1913 Chairman, Bell Telephone Co. of Pennsylvania. *TT 0.2: SP 0.2.*—Dec. 1913 to June 1916 Asst. to Supervisor of Track Constr., Pennsylvania Steel Co., Steelton, Pa., in charge (under Supervisor) of track construction and repairs, built concrete ore bridge approach and tracks for material storage. *TT 1.8: SP 0.8: P 1.*—June 1916 to Jan. 1917 Private, Corporal and Sergeant, First Pennsylvania Cavalry on Mexican Expedition. Jan. to May 1917 Asst. to Superv. of Track Constr., Bethlehem Steel Co., Steelton, on track construction and maintenance. *TT 0.3: P 0.3.*—June 1917 to June 1919 with U. S. Army, until Dec. 1917 as First Sergeant, 101st and 103d Engrs., Camp Hancock, Ga.; Jan. to April 1918 student, Third Officers' Training Camp, Camp Hancock, April to Aug. 1918 2d Lieut., Co. Co. E, 109th Infantry, 28th Div., and after Aug. 1918 1st Lieut., General Staff, Chaumont, France. *TT 1.3: SP 1.3.*—Sept. 1919 to date with Pennsylvania Dept. of Highways as follows: Sept. 1919 to Jan. 1920 Inspector in charge of construction of sheet asphalt (16 miles) in Lebanon and Berks Counties; Jan. to June 1920 in charge of 3 miles of bituminous concrete construction, Erie County; June 1920 to Oct. 1922 Senior Inspector instructing inspectors on construction of bituminous and concrete roads, principally material control; since Oct. 1922 Material Field Engr. in charge of material inspection and instructions on construction in State, in charge of supervisory field force, acting in advisory capacity to division engineers on materials, construction details and final inspection; past 4 years also in charge of researches and service test road studies, outlining procedure and supervising work; compiled and edited three volumes of research and experimental studies. *TT 9.4: P 9.4: RC 6.4: D 4.*—*TT 11.7: SP 1: P 10.7: RC 6.4: D 4.* Refers to W. H. Barton, Jr., J. L. Herber, H. S. Mattimore, G. A. Rahn, Jr., D. C. Stackpole, P. M. Tebbis, W. A. Van Duzer.

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(15) **MILLER, MURRAY JOHNSON**, Camaron, Nuevo Leon, Mexico. (Age 27. Born Gering, Nebr.) 1926 B. S. in C. E., Univ. of Nebr. *TT 4: P 4.*—May to Sept. 1918 and June 1920 to Aug. 1922 with U. S. Reclamation Service, until Oct. 1921 as Rodman, 9 months in charge of field party on location of canal, laterals and structures and irrigable area survey, and after Oct. 1921 Instrumentman on canal location, grades and profiles, also

in charge of, earthwork and concrete estimates for contractors. *TT 1.5: SP 0.7: P 0.8.*—June to Nov. 1926 Instrumentman, Nebraska State Highway Dept., in charge of inspection of bridge, gravel pit and road surfacing, also on highway construction estimates, grades and general survey. *TT 0.3: P 0.3.*—Nov. 1926 to date Irrigation Engr., J. G. White Eng. Corporation of Mexico, in charge of topographic surveys, location of canal and distributaries, also drains, land lines and subdivisions, Don Martin Project, States of Coahuila-Nuevo Leon. *TT 2.5: RC 2.5.*—*TT 8.3: SP 0.7: P 7.6: RC 2.5.* Refers to R. M. Conner, R. B. Diemer, C. E. Mickey, R. A. See, C. Seger, A. Weiss, F. E. Weymouth.

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(9) **NEWMAN, JAMES GLENN**, 207 Washington St., Frankfort, Ky. (Age 21. Born Lewisburg, Ky.) 1928 B. S. in Civ. Eng., Washington and Lee Univ. *TT 4: P 4.*—Aug. 1928 to date Draftsman, State Highway Dept., Frankfort, Ky. *TT 0.3: SP 0.3—TT 4.3: SP 0.3: P 4.* Refers to H. R. Creal, W. T. Lyle.

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(1) **NOLAN, WILLIAM ANTHONY**, 1211 Ogden Ave., New York City. (Age 25. Born New York City.) 1927 B. S. in C. E., Manhattan Coll. *TT 4: P 4.* March to Oct. 1928 Jun. Engr., for H. Robins Burroughs, New York City, on surveying, estimating and steel design on theatres. *TT 0.3: SP 0.3.* Oct. 1928 to date Jun. Engr., for H. G. Balcom, New York City, on steel design for office buildings. *TT 0.2: SP 0.2. TT 4.5: SP 0.5: P 4.* Refers to V. W. Bullock, J. L. Edwards.

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(1) **NYLAND, FRITZ CAREL**, 175 Forest Ave., Glen Ridge, N. J. (Age 36. Born Chicago, Ill.) 1914 B. S., Columbia Coll. 1916 C. E., Columbia Univ. *TT 4: P 4.*—June to Sept. 1916 Instructor in surveying and geodesy, Columbia Univ., in charge of part of work at surveying camp. *TT 0.3: P 0.3.*—Sept. to Dec. 1916 Chainman, New York Central R. R. *TT 0.1: SP 0.1.*—Jan. to Oct. 1917 Deck Officer and Aide, U. S. Coast and Geodetic Survey, on offshore hydrographic surveying, determination of ship's position, plotting, preparation of survey records, etc. *TT 0.6: SP 0.2: P 0.4.*—Jan. 1918 to date Asst. Civ. Engr. and Civ. Engr., U. S. Navy, being successively Lieut. (j.g.), Lieut., and Lieut.-Commander, on design, construction, etc., engaged as follows: Feb. to Oct. 1918 Asst. on construction, Naval Training Station, Great Lakes, Ill.; Oct. 1918 to June 1919 Res. Engr. for Bureau of Yards and Docks on construction of plant, Naval Torpedo Station, Alexandria, Va.; July 1919 to June 1920 Asst. on construction and maintenance, particularly waterfront and channel work, Navy Yard, Mare Island, Cal.; July 1920 to Feb. 1923 and May 1923 to July 1925 in charge of construction and maintenance of public works and utilities of Naval Station, Tutuila, Samoa, and (after May 1923) of Naval Air Station, San Diego, Cal., and (first period) also of buildings, roads, bridges, water supplies, etc., of American Samoan Islands; Sept. 1925 to June 1926 Company Officers' course, U. S. Army Engr. School, Ft. Humphreys, Va. (graduated); July 1926 to June 1927 in charge of reconstruction work, Naval Ammunition Depot, Lake Denmark, N. J., Adviser on similar work; since June 1927 on design and construction of public works and utilities at stations in Third Naval Dist., New York, including repairs, administration, plant inspections, etc. *TT 11.2: P 11.2: RC 8.2: D 1.5.*—*TT 16.2: SP 0.3: P 15.9: RC 8.2: D 1.5.* Refers to C. L. B. Anderson, R. E. Bakenhus, W. Bowie, L. E. Gregory, H. L. Hilton, A. Tyndall, D. C. Webb.

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(12) **OLIVER, JOHN CRAIG**, 2716 Forty-Second Ave. West, Vancouver, B. C., Canada. (Age 24. Born Edinburgh, Scotland.) 1926 B. A., and 1927 B. A. Sc., Univ. of B. C. *TT 4: P 4.*—May to Sept. 1923 Rodman, May to Sept. 1924 Instrumentman, and May to Sept. 1925 designing sewers, Municipal Engr.'s office, Point Grey, B. C., Canada. April to Sept. 1926 Draftsman, Forest Survey Party, Dept. of Public Lands, British Columbia, May 1927 to Sept. 1928 Asst. Designing Engr., Sewer Dept., City Engr.'s office, Vancouver, B. C. *TT 1.4: P 1.4.*—Sept. 1928 to date Instructor, Civ. Eng. Dept., Univ. of British Columbia. *TT 0.5: P 0.5.*—*TT 5.9: P 5.9.* Refers to E. A. Cleveland, W. E. Duckering, J. R. Grant, E. G. Matheson, H. B. Muckleston.

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(1) **OVENSHINE, EUGENE SAMUEL**, 45 West 71st Street, New York City. (Age 25. Born San Francisco, Cal.) 1925 C. E., Cornell Univ. *TT 4: P 4.*—June 1925 to date with Dwight P. Robinson & Co., Inc., New York City, as Draftsman, Instrumentman, Purchasing Asst., Designer and Checker and Structural Engr. *TT 3.2: SP 0.6: P 2.6.*—*TT 7.2: SP 0.6: P 6.6.* Refers to F. A. Barnes, W. C. Bodycomb, E. N. Burrows, G. E. Doyen, F. H. Frankland, W. B. Goddard, Jr., E. M. Vincent.

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(1) **PALMER, EDWARD ALEXANDER**, 22 East Thirty-Eighth St., New York City. (Age 43. Born Oakland, Cal.) Aug. 1903 to May 1907 student, Coll. of Civ. Eng., Univ. of California. *TT 1.5: P 1.5.*—1907 to 1913 with Southern Pacific R. R. Co., San Francisco, Cal., as

Laborer, Carpenter, Foreman, Instrumentman, Asst. Engr., Roadmaster, and Constr. Engr. in charge of reconstruction of terminals, suburban lines, etc. *TT 4.5: SP 1.5: P 3: RC 2.*—1913 to 1915 Engr. and Supt. for Erickson & Petterson, R. R. Contrs., San Francisco, Cal., in charge of constructing tunnels, viaducts, heavy railroad embankment and cuts. *TT 2.5: P 2.5: RC 2.5.*—1915 to 1917 Div. Engr., M. of W., Oregon Short Line R. R., Pocatello, Idaho, in charge of maintenance of over 2100 miles of main line and branch railways. *TT 2.5: P 2.5: RC 2.5.* 1917 to 1919 Constr. Engr., Oregon Washington R. R. & Navigation Co., Portland, Ore., supervised construction and reconstruction. *TT 2: P 2: RC 1.*—1919 to 1922 Contr., California, Oregon and Washington, grading, steam-shovel, drag-line, team and truck work, concrete, asphalt and crushed-rock macadam paving, concrete, pile and small steel bridges. *TT 3: P 3: RC 3.*—1922 to 1924 Cons. Engr. and Investigator for various contractors and legal firms; retained as expert in cases dealing with construction work or defaulted contracts. *TT 2.5: P 2.5.*—1924 to 1926 Constr. Engr. and Supt. for Dates & Hunt, Contrs., Buenos Aires, in charge of paving, sewer and other work. *TT 2: P 2: RC 2.*—1926 to 1928 Engr. on exploration in Bolivia and Western Brazil, mapped country for future detailed investigation. *TT 2: P 2.*—1928 to 1929 Asst. Engr. in charge of construction of oil refinery at Aruba, Dutch West Indies. *TT 1: P 1.*—*TT 23.5: SP 1.5: P 2.2: RC 11.* Refers to W. H. Kirkbride, R. A. Klein, S. Murray, E. N. Prouty, H. A. Roberts.

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(10) PEARCE, JOHN EDWIN, Box 1256, Lakeland, Fla. (Age 26. Born Alachua, Fla.) 1926 B. S. C. E., Univ. of Florida. *TT 4: P 4.*—June 1922 to Sept. 1923 and June 1926 to date with State Road Dept. of Florida, until Dec. 1926 as Instrumentman on location and construction of state highways in 1st and 5th Divs., also (June to Dec. 1926) in direct charge of work, and since Dec. 1926 Project Engr., on location surveys and mapping of state highways in 4th, 5th and 7th Divs. *TT 3.4: SP 0.5: P 2.8: RC 2.8.*—*TT 7.4: SP 0.6: P 6.8: RC 2.8.* Refers to R. L. Bannerman, G. H. Cairnes, A. W. Kinney, H. D. Mendenhall, H. J. Morrison, P. L. Reed.

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(15) PHILLIPS, ROLLAND WINFIELD, 2309 Rosewood Ave., Houston, Texas. (Age 25. Born Pittsburgh, Pa.) 1925 B. S. in Mech. Eng., and 1927 B. S. in Civ. Eng., Rice Inst. *TT 4: P 4.*—Summers 1923 and 1924 Draftsman, Houston Compress Co., Houston, Tex., on mechanical conveyor design and installation and drafting on cotton-handling equipment. June 1925 to Sept. 1926 Draftsman, Humble Oil and Refining Co., Bayton, Tex., drafting, design and checking of oil refinery equipment and municipal improvements, some efficiency-test work on pumping stations. *TT 1.2: P 1.2: D 1.*—Aug. 1927 to March 1928 Asst. to Field Engr., Eng. Service Corporation, Houston, being Chf. of Party and mapping, on gas-pipe-line location and surveys, also some consulting office practice. *TT 0.6: P 0.6: RC 0.3.*—March 1928 to date Asst. to J. B. Dannenbaum, Constr. Engr., Houston, on design of warehouses and industrial buildings, estimating and cost records on engineering construction. *TT 1: P 1: D 0.5.*—*TT 6.8: P 6.8: RC 0.3: D 0.5.* Refers to H. Culpeper, J. B. Dannenbaum, F. H. Shaw.

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(15) PRESTRIDGE, KENNETH KADE, Eagle Pass, Tex. (Age 33. Born Alvarado, Tex.) 1927 B. S., Agri. and Mech. Coll. of Tex. *TT 4: P 4.*—May 1917 to March 1918 Instrumentman, successively on highway construction, Kerns, Tex., on concrete construction at Port Arthur, Tex., for James Stewart & Co., and after Dec. 1917 on highway location, Johnson County, Tex. *TT 0.8: P 0.8.*—March 1918 to March 1921 with Louisiana Rio Grande Canal Co., Pharr, Tex., 6 months as Instrumentman, 6 months Asst. Engr., 1 year Engr. in charge of construction of canals and laterals to irrigate 30 000 acres, including checks, gates, flumes, etc. (about \$250 000), and 1 year Water Supt. in charge of water distribution over 60 000 acres and maintenance of over 300 miles of canals and laterals. *TT 3: P 3: RC 2.*—March to Sept. 1921 in private practice at Pharr. *TT 0.6: P 0.6.*—Dec. 1921 to Oct. 1924 with Wichita County Water Improvement Dist. No. 1, on design of dams, spillways and canal structures (17/10 years), as Draftsman and Designer, then Res. Engr. in charge of construction of 20 miles of main canal and 60 miles of laterals. *TT 2.8: P 2.8: RC 1.1: D 1.7.*—Oct. to Dec. 1924 with City of Dallas, Tex., on Garza Dam. *TT 0.2: P 0.2: D 0.2.*—Dec. 1924 to March 1927 with Hidalgo County Water Improvement and Control Dist. No. 1, as Designer (1 year) on reinforced concrete pumping-plant house and canal structures, then Asst. Engr. on construction. *TT 2.2: P 2.2: RC 1.2: D 1.*—March 1927 to date Designer and Office Engr. in charge of drafting for canals and laterals to irrigate 60 000 acres, Maverick County Water Improvement Dist. No. 1. *TT 2: P 2: D 2.*—*TT 15.6: P 15.6: RC 4.3: D 4.9.* Refers to O. N. Floyd, J. L. Lochridge, W. L. Rockwell, T. C. Shuler, R. A. Thompson, P. A. Welty.

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(7) **PROPER, HERBERT JAMES**, 808 East Kingsley St., Ann Arbor, Mich. (Age 29. Born Castle, N. Y.) 1926 B. S. in C. E., Univ. of Mich. *TT 4: P 4.*—Aug. to Dec. 1926 on supervision of sewer construction for R. T. Liddicoat, Contr. *TT 0.3: P 0.3: RC 0.3.*—Dec. 1926 to date with H. H. Atwell, Cons. Engr., Ann Arbor, Mich., as Instrumentman, Inspector, Draftsman on county drains, pavements, surveys, etc., and (at times) Chf. of Party. *TT 1.6: SP 0.6: P 1.—TT 5.9: SP 0.6: P 5.3: RC 0.3.* Refers to A. J. Decker, R. A. Dodge, L. M. Gram, H. E. Riggs, W. C. Sadler.

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(5) **RASBACH, JAMES BELLINGER**, Accotink, Va. (Age 36. Born Ilion, N. Y.) 1917 B. S. in C. E., Mich. State Coll. *TT 4: P 4.*—Aug. 1912 to July 1913 Draftsman, Weston-Mott Co., Flint, Mich., mechanical drafting and details. *TT 0.4: SP 0.4.*—Aug. 1917 to July 1919 with U. S. Army, until Nov. 1917 at Second Officers' Training Camp, then with 16th Field Artillery, as 2d Lieut., being Executive and Battery Officer, and (after Nov. 1918) 1st Lieut., being Reconnaissance Officer and Battery Commander. *TT 1.8: SP 0.1: P 1.7: RC 0.5.*—Sept. 1919 to Sept. 1921 Draftsman and Computer, Optical Div., Ordnance Dept., U. S. Navy, on details, layouts and designs. *TT 2: P 2: D 1.*—Oct. 1921 to Sept. 1925 1 year Cons. Engr. on construction, remainder of time not on engineering work. *TT 1: P 1: RC 1: D 1.*—Oct. 1925 to date with office of Public Bldgs. and Public Parks of National Capital, until April 1927 as Draftsman and Computer, Arlington Memorial Bridge Comm., being Chf., Computing Sec. of Surveying and Drafting Sec., April 1927 to Nov. 1928 Asst. Engr., and since Dec. 1928 Associate Engr., being Chf. of Computing Sec. and Asst. Chf. of Surveying and Drafting Sec.; design for park area development, etc. *TT 3.5: P 3.5: RC 3: D 3.—TT 12.7: SP 0.5: P 12.2: RC 4.5: D 5.* Refers to C. H. Brown, G. E. Clark, U. S. Grant, 3d, E. R. Kent, J. L. Nagle, C. A. Peters, Jr.

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(3) **REDWOOD, JOHN PERCY**, 7 Hathway Place, Palmyra, N. Y. (Age 32. Born Paul Smith's, N. Y.) 1917 C. E., Cornell Univ. *TT 4: P 4.*—June 1917 to Aug. 1919 2d and 1st Lieut., U. S. Infantry, part of time on special duty in charge of engineering work, surveying and mapping, construction of sewers, water lines, rifle range and drainage. *TT 0.6: P 0.6: RC 0.6: D 0.3.*—Aug. 1919 to June 1920, Oct. 1920 to July 1922 and Jan. to April 1924 Civ. Engr., in private practice, at Bay Pond, and Malone, N. Y., surveying, mapping, construction of roads, concrete structures, sewers, water-works and buildings, etc. *TT 2.8: P 2.8: RC 2.8: D 1.4.*—June to Oct. 1920 Asst. Supt. of Water-Works, Malone Village, operating water system, laying new mains, supervising paving, sewer and sidewalk construction. *TT 0.3: P 0.3: RC 0.3: D 0.1.*—Oct. to Dec. 1923 Civ. Engr. with Brown & Gibbs, Engrs., Asheville, N. C., surveying, mapping, road, sewer and water construction, subdivision and development work. *TT 0.2: P 0.2: RC 0.2: D 0.1.*—July 1922 to Sept. 1923 and April 1924 to date Civ. Engr. with Charles C. Hopkins, Rochester, N. Y., on construction of complete sewer, water and wastes-disposal systems, concrete structures, steel tanks, dams, reservoirs, etc.; design, estimates and appraisals. *TT 5.9: SP 0.4: P 5.5: RC 5.5: D 1.7.—TT 13.8: SP 0.4: P 13.4: RC 9.4: D 3.6.*—Refers to F. A. Barnes, C. B. Benson, C. C. Hopkins, W. S. Lozier, F. J. Seery.

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(2) **REED, ROYDEN EUGENE**, 21 Watson St., Manchester, N. H. (Age 34. Born Manchester, N. H.) Sept. 1913 to Feb. 1914 student in engineering, Norwich Univ., Northfield, Vt. Nov. 1917 to March 1919 with U. S. Navy, until June 1918 as student in aerodynamics, navigation, theory of flight, etc., successively at Massachusetts Inst. of Technology, U. S. Navy Ground School and Naval Air Detachment, U. S. Navy, Goodyear Field, Akron, Ohio, from April to June 1918 also Executive Officer in responsible charge of students. After June 1918 Commissioned Officer, U. S. Navy, on ships and at stations in United States and abroad, in responsible charge of students and on operations of air units as officer in responsible charge. *TT 1.4: P 1.4: RC 0.9.*—March 1919 to May 1920 student in textile industry, Worsted Div., Amoskaeg Mfg. Co., Manchester, N. H. *TT 1.1: P 1.1.*—May 1920 to Sept. 1922 Asst. Mgr., Asbestos Corporation of America, Hyde Park, Vt., in responsible charge of reconstruction of wooden dam, additions to power house, installation of machinery, Stevens Mills, Missisquoi River, Richfort, Vt., building 21 miles of 33 000-volt transmission line and storage warehouse, rehabilitation of mill buildings and other plant, construction of gravel roads, etc. *TT 2.3: P 2.3: RC 2.3.*—Sept. 1922 to date with L. H. Shattuck, Inc., Engrs., and Contrs., Manchester, N. H., until Nov. 1922 as Draftsman, then Asst. Engr., from Nov. 1922 to Feb. 1923 on office and field work; Feb. 1923 to Jan. 1924 on topographic surveys, being Chf. of Party and (part of time) acting as Res. Engr. on hydro-electric development (about \$253 000) for Keene Gas & Elec. Co., at Marlboro, N. H.; Jan. 1924 to Oct. 1925 topographic surveys for hydro-electric storage developments, preliminary plant designs, computation, esti-

matting, design of minor structures and general engineering office work; Oct. 1925 to Jan. 1927 acting as Res. Engr. for firm on Jackman development, hydro-electric (Vaughan Engrs.) for N. E. Public Service Co., at Hillsboro, N. H. (about \$450 000); since Jan. 1927 on design of buildings including mattress factory, newspaper and printing plants, paper and paper bag (cement) mills, garage, school, etc.; water-works for Town of Epping, N. H., two dams and a small hydro-electric plant, various reports, etc.; 1928 to date also Cons. Engr. for City of Manchester on municipal airport development; work consists of design, layout and construction supervision of airport, design and supervision of erection of hangars and other buildings, technical advice, etc. *TT 6.4: SP 0.1: P 6.3: RC 8.5: D 2.5.—TT 11.2: SP 0.1: P 11.1: RC 8.5: D 2.5.* Refers to F. E. Everett, R. S. Holmgren, P. A. Shaw, G. G. Shedd, J. F. Vaughan.

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(11) REEVES, ARTHUR BLAINE, Torrington, Wyo. (Age 42. Born Ashton, Iowa.) 1910 B. S. in C. E., and 1920 C. E., Iowa State Coll. *TT 4: P 4.*—June to Aug. 1910 Instrumentman for C. R. Inmann, Bldg. Contr., Cheyenne, Wyo. *TT 0.1: SP 0.1.*—Aug. 1910 to date with U. S. Reclamation Service, North Platte Project, engaged as follows: Aug. to Dec. 1910 Rodman; Dec. 1910 to Aug. 1911 Office Engr. on design of canal system and structures; Aug. 1911 to May 1912 Transitman on canal location, and part of time on estimates and designs; May 1912 to May 1915 Res. Engr. in charge of investigation, location and construction of drainage works; May 1915 to April 1916 Chf. of Party on main-canal location and revisions, Ft. Laramie Div.; April 1916 to Feb. 1922 Res. Engr. in charge of surveys, location and construction of main canal, lateral and drainage systems on division of Ft. Laramie Div. (expenditure approx. \$2 000 000); Feb. 1922 to April 1923 Irrigation Mgr., Ft. Laramie Div.; April 1923 to Dec. 1926 Asst. Irrigation Mgr. on entire North Platte project, in charge of replacement of structures and all drainage construction; since Jan. 1927 Supt., Goshen Irrigation Dist., in charge of operation and maintenance of Wyoming part of Ft. Laramie Div., delivering water to 52 000 acres and carrying water to 55 000 additional acres. *TT 18.3: SP 0.2: P 18.1: RC 16.9 D 2.6.—TT 22.4: SP 0.3: P 22.1: RC 16.9: D 2.6.* Refers to H. D. Comstock, F. C. Emerson, B. E. Hayden, O. T. Reedy, R. F. Walter, A. Weiss.

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(1) RINEBOLD, WILLIAM JENNINGS, 506 Ft. Washington Ave., New York City. (Age 31. Born West Superior, Wis.) 1922 B. S. in C. E., Bucknell Univ. *TT 4: P 4.*—Jan.-June 1923 Rodman, Pennsylvania R. R. *TT 0.5: P 0.5.*—July 1923 to Nov. 1925 Jun. Engr., Delaware River Bridge Joint Comm., giving lines and grades and supervising construction on Delaware River bridge. *TT 2.4: P 2.4: RC 1.*—March 1926 to March 1928 Asst. Engr., Coral Gables Corporation and Coral Gables Constr. & Supply Co. (subsidiary), supervising construction of sidewalks, pavements, waterways, timber bridges, etc. *TT 2: P 2: RC 2.*—Sept. 1928 to date Transitman, Port of New York Authority, in charge of fieldwork on New York anchorage of Hudson River bridge. *TT 0.4: P 0.4: RC 0.4.—TT 9.3: P 9.3: RC 3.4.* Refers to E. W. Bowden, M. B. Case, R. G. Cone, F. O. Dufour, C. Elcock, D. A. Keefe.

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(8) ROBISON, SIDNEY JAMES, 208 South LaSalle St., Chicago, Ill. (Age 49. Born Montezuma, Iowa.) 1900 A.B., Grinnell (Iowa) Coll. 2 years student, Armour Inst. Tech. *TT 1: P 1.*—March 1903 to March 1911 Draftsman, etc., General Chemical Co., Western Steel Car & Foundry Co., Illinois Steel Co. and others. *TT 4: SP 4.*—March 1911 to Jan. 1913 Asst. Mech. Engr., Universal Portland Cement Co., Buffington, Ind. *TT 1.7: P 1.7: D 1.7.*—Jan. 1913 to Jan. 1918 with Illinois Steel Co., until Aug. 1916 as Chf. Draftsman and Supt. of Erection, North Works, then Asst. Chf. Engr., at Gary, Ind. *TT 5: P 5: RC 5: D 2.*—Jan. 1918 to April 1919 Chf. Engr., Pensacola (Fla.) Shipbuilding Co., designed and supervised construction of shipbuilding plant. *TT 1.2: P 1.2: RC 1.2: D 1.2.*—May to Oct. 1919 Chf. Engr., Ketter-Elliott Co., Chicago, designed and supervised construction of forge works. *TT 0.5: P 0.5: RC 0.5: D 0.2.*—Oct. 1919 to date Asst. Chf. Engr., Universal Portland Cement Co., designed and supervised construction of harbor at Buffington, Ind., and a number of other major improvements. *TT 9.3: P 9.3: RC 9.3: D 9.3.—TT 22.8: SP 4: P 18.8: RC 16.1: D 18.8.* Refers to M. A. Berns, J. Brunner, E. J. Fuel, E. H. Heald, J. W. Woermann.

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(1) SANDIFER, DOUGLAS ALBERT NEVILLE, 22 Littleover Ave., Hall Green, Birmingham, England. (Age 27. Born Brighton, Sussex, England.) Senior Whitworth Scholar (1921, Board of Education). 1923 Assoc., and 1924 D. I. C., Imperial Coll. of Sci. and Tech., and B. Sc. in Eng., City and Guilds Inst., Eng. Coll., London, England. *TT 4: P 4.*—1917 to 1921 Engine Fitter Apprentice, H. M. Dockyard, Chatham, Kent, England, work included shop erection and testing, also installation and repair of engines for cruisers, torpedo-boats

and submarines; last year in drawing office. *TT 2: SP 2.*—1921 to 1923 student, and 1923 to 1924 Research Student, City and Guilds Eng. Coll., London.—1924 to 1927 Asst., Hydro-Elec. Dept., J. Blakeborough & Sons, Ltd., Brighouse, Yorkshire, England, on design and testing of valves and other hydraulic control apparatus and investigation of hydraulic phenomena. *TT 3: P 3: D 3.*—1927 to date Lecturer in Machine Design, Mech. Eng. Dept., The University, Birmingham, England; work includes drawing office instruction; research work, design of new plant for workshops, etc. *TT 2: P 2: RC 2: D 2.*—*TT 9: P 9: RC 2: D 5.* Refers to F. F. Fergusson, G. H. Lundgren. (Applies in accordance with Sec. 1, Art. I, of the By-Laws.)

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(14) SCHMITZ, ERWIN ANTHONY, 2114 South Compton Ave., St. Louis, Mo. (Age 39. Born St. Louis, Mo.) 1913 B. S. in C. E., Univ. of Ill. *TT 4: P 4.*—July 1913 to Jan. 1915 Engr. and Timekeeper, until May 1914 with John B. Turner Co., then Heman Constr. Co., on design of forms and centering, laying out lines and grades, keeping time and cost data on construction of reinforced concrete viaducts. *TT 1.3: SP 0.2: P 1.1: D 0.4.*—April to Nov. 1916 Engr. and Draftsman, St. Louis (Mo.) County, on road work, plotting profiles, establishing grades, designing bridges and culverts. *TT 0.5: SP 0.1: P 0.4: D 0.3.* Jan. 1915 to April 1916 and Nov. 1916 to date with City of St. Louis, Mo., as follows: Jan. 1915 to April 1916 Eng. Draftsman, drafting, calculating, designing and surveying in connection with design of bridges; Nov. 1916 to Nov. 1919 Asst. Engr., designing, detailing, surveying and inspecting in connection with design and construction of bridges and buildings; Nov. 1919 to Aug. 1923 Civ. Engr., on preliminary surveys and studies, design and superintending construction of bridges and buildings; since Aug. 1923 Senior Civ. Engr. in charge of design and superintending construction of steel and reinforced concrete bridge structures. *TT 12.8: SP 0.6: P 12.2: RC 5.5: D 5.9.*—*TT 18.6: SP 0.9: P 17.7: RC 5.5: D 6.6.* Refers to L. R. Bowen, W. R. Crecellus, O. F. Harting, F. N. Hatch, W. E. Rolfe, C. E. Smith, J. C. Travilla.

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(5) SILVERMAN, MAX, Box 897, Richmond, Va. (Age 30. Born Krakau, Austria.) 1923 B. S. in C. E., Ohio Northern Univ. *TT 4: P 4.*—Oct. 1923 to Feb. 1924 Structural Draftsman, Canadian Bridge Co., Walkerville, Ont. *TT 0.1: SP 0.1.* Feb. 1924 to Feb. 1925 Structural Draftsman at Pottstown, Pa., and Oct. 1927 to March 1928 Designer on Hudson River Bridge, New York City with McClintic-Marshall Constr. Co. *TT 1: SP 0.5: P 0.5.*—Feb. 1925 to Oct. 1927 Structural Draftsman, Checker and Layerout, and 'March to June 1928 Designer on special work, American Bridge Co., Ambridge, Pa. *TT 2.1: SP 0.9: P 1.2: D 0.2.*—June to Aug. 1928 Designer on special work, Bethlehem (Pa.) Steel Co. *TT 0.2: P 0.2: D 0.2.*—Aug. 1928 to date Structural Designer, Designer and Checker of designs on improvements, Chesapeake & Ohio Ry. Co. *TT 0.7: P 0.7: D 0.7.*—*TT 8.1: SP 1.5: P 6.6: D 1.6.* Refers to A. C. Copland, F. L. Dudley, W. B. Keim, M. G. Littlefield, R. G. Manning, V. B. W. Poulsen, G. F. Sparhawk.

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(5) SNYDER, CHARLES WILMER, 2727 Pennsylvania Ave, Baltimore, Md. (Age 24. Born Baltimore, Md.) Graduated from Baltimore Pol. Inst. Past 6 years (nights) student, courses for technical workers at Johns Hopkins Univ.—June 1923 to date Structural Draftsman, Office of Herman F. Doeelman, Cons. Engr., Baltimore, Md. *TT 4.1: SP 1.6: P 2.5: RC 2.5: D 1.5.* Refers to C. R. Burdette, P. G. Crout, H. F. Doeelman, O. H. Schroedl, J. T. Thompson, C. A. Weiller.

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(15) SPENCE, EUGENE VIERLING, City Hall, San Angelo, Tex. (Age 40. Born San Diego, Tex.) 1911 B. S. in C. E., and 1925 M. S., A. & M. Coll. of Tex. *TT 4: P 4.*—July 1911 to April 1913 Instrumentman, Chf. of Party and Asst. Div. Engr., Medina Irrigation Co., San Antonio, Tex. *TT 0.9: SP 0.9.*—Nov. 1914 to Dec. 1916 County Engr., Jim Wells County, on design and construction of highway grading and bridging (\$500 000). *TT 2.1: P 2.1: RC 1.4: D 0.7.*—April 1918 to Nov. 1914 and Dec. 1916 to Sept. 1924 (except Sept. 1917 to May 1919 Capt., Field Artillery, U. S. Army) in private practice of engineering, until Nov. 1914 on land subdivision and drainage work at Yorktown, Tex., then on water-works and land subdivision at Alice, Tex., and land subdivision and drainage work, DeWitt County Drainage Dist. No. 1, Cuero, Tex.; also (after May 1919) County Surveyor of Jim Wells County and City Engr. of Alice. *TT 7.7: P 7.7: RC 6.2: D 1.5.*—Sept. 1924 to June 1925 post-graduate student, Agricultural and Mechanical Coll. of Texas.—July 1925 to date with City of San Angelo, Tex., until Dec. 1928 as City Mgr. awarding contracts and having general direction of work on sewers (\$300 000), paving (\$1 300 000), bridges (\$50 000), buildings (\$350 000) and administration of all city departments, and since Dec.

1929 Superv. Engr. on completion of this work. *TT 3.7: P 3.7: RC 3.7.—TT 18.4: SP 0.9: P 17.5: RC 11.3: D 2.2.* Refers to E. P. Arneson, C. T. Bartlett, J. T. L. McNew, J. W. Porter, J. J. Richey, O. A. Seward, Jr.

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(9) STANSBERRY, ELMER FREDERICK, 70 East Eighteenth Ave., Columbus, Ohio. (Age 23. Born Dayton, Ohio.) 1928 B. C. E., Ohio State Univ. *TT 4: P 4.*—Summer 1926 Rodman, summer 1927 Levelman, and summer 1928 Transitman in charge of party, City of Dayton, Ohio, on calculations, estimates, plans, etc.; also some sewer designs.—Jan. to June 1928 and Nov. 1928 to date with State Highway Dept., until June 1928 as Asst. Engr. under Prof. J. M. Montz, Ohio State Univ., made surveys and drew plans for grade separation project on Cleveland-Sandusky Road with Cleveland, Cincinnati, Chicago & St. Louis R. R. and Lake Shore Elec. R. R. (Thesis project), and since Nov. 1928 Tracer, Bureau of Bridges, tracing designs of steel and reinforced concrete bridges, also checking steel lists and concrete quantities. *TT 0.2: SP 0.2.—TT 4.2: SP 0.2: P 4.* Refers to V. A. Eberly, J. M. Montz, C. T. Morris, J. C. Prior, J. R. Shank.

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(13) SULLIVAN, GEORGE LEONARD, 725 Madison St., Santa Clara, Cal. (Age 47. Born Jackson, Nebr.) 1908 B. Sc. in M. E., Univ. of Nebr. 1910 M. E., Univ. of Colo. 1914 Ph. D., Univ. of Santa Clara. *TT 4: P 4.*—June to Sept. 1908 Foreman, Weber-Duller Constr. Co., Houston, Tex., on pumping-engine installation. *TT 0.1: SP 0.1.*—Sept. 1908 to June 1911 Instructor in Mech. Eng., Univ. of Colorado, and Sept. 1911 to June 1912 Asst. Prof. of Mech. Eng., Montana State Coll., being responsible at both for instruction in machine design and thermodynamics. *TT 3.5: P 3.5.*—Jan. to Sept. 1918 Draftsman and Designer, Phelps Dodge Corporation, Blabee, Ariz., design work on concentrator and power plant. *TT 0.7: P 0.7: RC 0.3.*—Sept. 1912 to Jan. 1918 Prof. of Mech. Eng., and Sept. 1918 to date Dean, Coll. of Eng., Univ. of Santa Clara; vacations (prior to 1918) on minor engineering; since Sept. 1918 also Cons. Engr. on various work including design, purchase and superintendence of construction of boiler plant; at present also City Engr. of Santa Clara, on plans for out-fall and storm sewers, paving, etc.; also associated with Hamm, Grant & Bruner of Los Angeles on design of planing mill. *TT 15.7: P 15.7: RC 15.7: D 3.—TT 2.4: SP 0.1: P 23.9: RC 16: D 3.* Refers to C. B. Goodwin, M. S. Ketchum, E. A. Reinke, C. R. Richards, O. V. P. Stout, C. C. Williams.

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(4) TIMBY, ELMER KNOWLES, 68 Wiggins St., Princeton, N. J. (Age 23. Born Salt Lake City, Utah.) 1928 B. C. E., Ohio State Univ. *TT 4: P 4.*—Summer 1926 Asst., Eng. Corps, Pennsylvania R. R., instrument work, inspection, computation of quantities.—Summer 1927 Asst. on topographic survey, State of Ohio, drafting, checking maps, computing drainage areas, etc.—Jan. to July 1928 Instructor in Civ. Eng., Ohio State Univ., until June 1928 (while student) on class and field work, being Secy. of Dept., then at Surveying Camp. *TT 0.1: P 0.1.*—July to Sept. 1928 Chf. of Party, U. S. Geological Survey, surveying part of Licking River, Ky. *TT 0.2: P 0.2: RC 0.2.*—Sept. 1928 to date Instructor, School of Eng., Princeton Univ. *TT 0.5: P 0.5.—TT 4.8: P 4.8: RC 0.2.* Refers to G. E. Beggs, F. H. Constant, C. T. Morris, C. E. Sherman, R. C. Sloane.

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(14) TRACY, RALPH NEWCOMB, 909 Ninth St., Fairbury, Nebr. (Age 33. Born Stratton, Nebr.) 1921 B. S., Eng. Coll., Univ. of Nebr. *TT 4: P 4.*—Feb. to Oct. 1917 and June 1923 to March 1925 with Chicago, Burlington & Quincy R. R. Co., Eng. Dept., Lines West, on maintenance at Casper, Wyo., and Alliance, Nebr., and (after June 1923) in office of Chf. Engr. on map making and designing. *TT 2.4: P 2.4: D 0.7.*—Oct. 1917 to Aug. 1920 Private, Co. B, 23d Engrs., 1½ years in France, 4 months at Univ. of Montpellier, France. *TT 1.4: SP 1.4.*—June 1921 to June 1923 State San. Engr., Nebraska State Bureau of Health, Lincoln, Nebr. *TT 2: P 2: RC 2: D 1.*—March 1925 to May 1927 with Henningson Eng. Co., Mun. Cons. Engrs., Omaha, Nebr., on field supervision, office organization, design and promotion. *TT 2.2: P 2.2: RC 2.2: D 1.5.*—May 1927 to date City Engr., Street and Alley Commr., and (after 6 months) also Light and Water Commr., Fairbury, Nebr., in charge of municipal improvements and operation of light and water plant (4 000 000-kw. annually); during past year designed and constructed plant improvement (\$100 000), etc. *TT 1.9: P 1.9: RC 1.9: D 0.8.—TT 13.9: SP 1.4: P 12.5: RC 6.1: D 4.1.* Refers to A. W. Andrews, F. T. Darrow, W. Grant, R. M. Green, C. E. Mickey, F. M. Veatch.

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(1) TSENG, TSAO WEN, Kwang-si Univ., Wuchow, Kwang-si, China. (Age 28. Born Nanking, China.) 1922 B. S. Ry. C. E., Univ. of Ill. *TT 4: P 4.*—Jan. to July 1920 Inspector in building construction for C. C. Nieh on the erection of the Great China Textile Mills. *TT 0.3: SP 0.3.*—Jan. 1924 to Dec. 1925 Teacher, The Great China Univ. and

Chungchi Univ., Shanghai, China. *TT 2: P 2.*—Jan. to Dec. 1926 Prof., Civ. Eng. Dept., Fuh Ton Univ., Shanghai, China. *TT 1: P 1.*—Jan. 1927 to Jan. 1928 Asst. Engr. in charge of Yung Chuang highway construction, Kwang-si, China. *TT 1: P 1: RC 1: D 0.5.*—Sept. 1928 to date Prof., Civ. Eng. Dept., Kwang-si Univ., Wuchow, Kwang-si, China. *TT 0.5: P 0.5.*—*TT 8.8: SP 0.3: P 8.5: RC 1: D 0.5.* Refers to E. E. King, H. H. Ling.

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(9) **VELLEMAN, GERARD**, 3863 Alameda Drive, Toledo, Ohio. (Age 32. Born Amsterdam, Holland.) 1923 C. E., Technische Hoogeschool, Delft, Holland. *TT 4: P 4.*—Feb. to Aug. 1923 Inspector at municipal gas plant of The Hague, Holland. *TT 0.4: P 0.4.*—Aug. 1923 to June 1924 Designing Engr., De Algemeene Beton Co., Gen. Contrs., The Hague, Holland, on concrete and steel construction. *TT 0.8: P 0.8: RC 0.8: D 0.8.*—July 1924 to Dec. 1925 Cadet Engr., Doherty Training School, Public Service Co., Denver, Colo. *TT 0.7: SP 0.7.*—Dec. 1925 to May 1927 with Henry L. Doherty & Co., New York City, until May 1925 as Budget Engr., analyzing construction budgets of operating companies, then Designing Draftsman on power plants and survey of future sites. *TT 1.3: P 1.3: D 0.9.*—May 1927 to date Plant Mech. Engr., Toledo Edison Co., inspecting and representing company at present plant extension. *TT 1.8: P 1.8: RC 1.8.*—*TT 9: SP 0.7: P 8.3: RC 2.6: D 1.7.* Refers to R. P. Barber, J. A. Bjerregaard, C. A. Lee, C. E. Payne, H. H. Woning.

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(7) **WALKER, BOYD FREEZE**, 546 Franklin Ave., Council Bluffs, Iowa. (Age 41. Born Des Moines, Iowa.) 1912 B. S. in C. E., Iowa State Coll. *TT 4: P 4.* Jan. 1910 to Jan. 1911 and June 1912 to May 1913 Instrumentman successively with C. E. Paine, Algona, Iowa, Chicago, Rock Island & Pacific Ry. Co., and Ambursen Co., Prince Albert, Ont., Canada. *TT 1: SP 1.*—May, 1913 to May 1914 Deputy County Surveyor, Ft. Benton, Mont., office and field work on roads. *TT 0.5: SP 0.5.* April 1915 to Aug. 1917 Asst. County Engr., and Aug. 1917 to Aug. 1919 County Engr., Pottawattamie County, Iowa, on road and bridge work. *TT 3.7: SP 0.7: P 3: RC 3: D 3.*—Aug. 1919 to April 1926 Engr. (private practice) on county drainage work for various counties in Iowa, special investigations and reports for corporations and individuals, etc. *TT 6.7: P 6.7: RC 6.7: D 6.7.*—April 1926 to date City Engr., Council Bluffs, Iowa, in charge of design, construction and maintenance of paving, curbing, sewers, sidewalks, bridges and flood control. *TT 3: P 3: RC 3: D 3.*—*TT 18.9: SP 2.2: P 16.7: RC 12.7: D 12.7.* Refers to W. M. Alsin, W. E. Buell, Jr., J. S. Dodds, R. E. Edgecomb, R. H. Findley, R. W. Gaylord, C. T. Jackson, J. L. McGrane, E. F. Manson, L. M. Martin, J. H. Mayne, C. Moriarty, R. N. Towl, H. S. Williams.

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(7) **WARNER, RAYMOND ALOYSIUS**, Mt. Clemens, Mich. (Age 27. Born Hastings, Mich.) 1924 B. C. E., Univ. of Detroit.—June 1924 to April 1925 Field Engr. on municipal and county engineering projects, under H. R. O'Mara, City Engr., Mt. Clemens, Mich. *TT 0.8: P 0.8.*—April 1925 to Jan. 1929 Engr. in charge of design and construction of water and sewerage systems at East Detroit, Mich., under H. R. O'Mara. *TT 3.8: P 3.8: RC 3.8.*—Jan. 1929 to date Chf. Engr., Macomb County Drain Comm., Mt. Clemens. *TT 0.2: P 0.2: RC 0.2.*—*TT 4.8: P 4.8: RC 4.* Refers to J. B. T. Colman, D. P. Gilmore, J. M. Hartgering, C. W. Hubbell, A. Roth, F. E. Weaver.

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(1) **WASHBURN, CARL TRACY**, 175 Madison Ave., New York City. (Age 25. Born Northampton, Mass.) 1926 C. E., Thayer School of Civ. Eng. *TT 4: P 4.*—May 1926 to date Jun. Engr. with Hazen & Whipple, on design of water-works structures and distribution systems. *TT 2.9: P 2.9.*—*TT 6.9: P 6.9.* Refers to C. M. Everett, F. H. Hapgood, A. Hazen, A. P. Loriot, M. Pirnie.

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(2) **WEATHERBY, WALTER CLIFTON**, 811 Beacon St., Boston, Mass. (Age 21. Born Memphis, Tenn.) 1928 B. S. in Civ. Eng., Ala. Pol. Inst. *TT 4: P 4.*—June to Sept. 1928 Draftsman, Mobile County Highway Dept. At present graduate student, Massachusetts Inst. of Technology. *TT 0.1: SP 0.1.*—*TT 4.1: SP 0.1: P 4.* Refers to C. A. Baughman, J. A. C. Callan, C. H. Sutherland.

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(1) **WESTON, HARRY BEARNE**, 500 Garfield Ave., Jersey City, N. J. (Age 35. Born Philadelphia, Pa.) 1914 B. S. in C. E., Pennsylvania State Coll. *TT 4: P 4.*—July 1915 to June 1916 Asst. to Chf. Engr., Barber Asphalt Co., Maurer, N. J., on layout and construction of plant buildings. *TT 0.9: P 0.9: RC 0.9.*—Oct. 1917 to Jan. 1919 Sergeant, Co. E, 7th U. S. Engrs., U. S. Army, on various construction in United States and France. *TT 1.3: P 1.3: RC 1.3.* Aug. 1921 to Sept. 1923 Asst. Supt. of Constr., Union Paving Co., Philadelphia, Pa., on street and highway construction. *TT 2.1: P 2.1: RC 2.1.*

—Sept. 1923 to June 1926 Inspector and Field Engr., Hugh L. Cooper & Co., Inc., New York City, on construction of Wilson Dam, Florence, Ala. *TT 2.7: P 2.7: RC 2.7.*—Jan. 1927 to date Constr. Supt., Henry Steers, Inc., on foundation work for bridges and commercial buildings, pile foundations, dock construction, etc. *TT 2.2: P 2.2: RC 2.2.*—*TT 13.2: P 13.2: RC 9.2.* Refers to R. F. Buck, J. W. Hall, W. D. Malcolm, J. A. Miller, Jr., R. A. Schroeder, C. E. Trout, J. J. Vail.

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(11) **WHITE, CLARENCE**, P. O. Box 12, Yuma, Ariz. (Age 25. Born Yuma, Ariz.) 1928 B. S. in Civ. Eng., Univ. of Ariz. *TT 4: P 4.*—June 1928 to date Hydrographer and Instrumentman, Bureau of Reclamation, Yuma (Ariz.) Project. *TT 0.3: SP 0.3.*—*TT 4.3: SP 0.3: P 4.* Refers to E. S. Borgquist, F. C. Kelton, G. E. P. Smith.

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(1) **WIKSTROM, ARVE SIXTEN**, 151 Chestnut St., Montclair, N. J. (Age 21. Born Montclair, N. J.) 1929 C. E., Cornell Univ. *TT 4: P 4.*—Refers to F. A. Barnes, E. N. Burrows, G. A. Graham, H. N. Ogden, J. E. Perry.

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(11) **WYANT, CARL**, 117 San Ysidro Rd., Santa Barbara, Cal. (Age 38. Born Montecito, Cal.) 1913 A. B. in Civ. Eng., Stanford Univ. *TT 4: P 4.*—Sept. 1911 to April 1912 Chainman and Rodman, Oregon & Washington R. R. & Navigation Co. *TT 0.3: SP 0.3.*—May to Aug. 1913 Instrumentman and Draftsman, Standard Oil Co. of California. *TT 0.1: SP 0.1.*—Aug. 1913 to April 1914 Instrumentman, Sierra & San Francisco Power Co., Strawberry rockfill dam construction. *TT 0.3: SP 0.3.*—May 1914 to Sept. 1918 Draftsman, bridge design, Asst. Engr. and Chf. Inspector, City Engr's office, Santa Barbara, Cal. *TT 2.7: SP 1.5: P 1.2: RC 0.7: D 0.5.*—Sept. to Nov. 1918 Private, Engr. Officers' Training Camp, Camp Humphreys, Va.—Jan. 1919 to Nov. 1921 member of firm, Cook, Wyant & Moore, Engrs., Santa Barbara, design and construction of streets, sewer systems and water supplies, etc. *TT 2.8: P 2.8: RC 1.7: D 1.1.*—Nov. 1921 to date Res. Engr. and Gen. Mgr., Montecito County Water Dist., in charge of design and construction of water system for 7500-acre residential district, including 44 miles distribution system, concrete reservoirs and incidental structures, 100-ft. hydraulic fill dam, two tunnels (11376 and 1000 ft.), construction railroad (3½ miles), tunnel lining (4000 ft.), and design of 160-ft. arch dam and 55-ft. auxiliary multiple arch dam (under construction) (estimated total cost \$2406000). *TT 7.4: P 7.4: RC 5: D 2.3.*—*TT 17.6: SP 2.2: P 15.4: RC 7.4: D 3.9.* Refers to G. C. FitzGerald, C. D. Marx, M. M. O'Shaughnessy, C. A. Smith, J. G. Spielman, C. B. Wing.

FOR TRANSFER

FROM THE GRADE OF ASSOCIATE MEMBER

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(4) **AROYAN, HAGOP HAROOTUNE**, Assoc. M., 40 Sunshine Rd., Upper Darby, Pa. (Elected October 10, 1927.) (Age 39. Born Alntab, Turkey.) 1915 M. C. E., Harvard Univ. *TT 4: P 4.*—Aug. 1915 to Aug. 1916 Draftsman, Pennsylvania R. R., American Bridge Co. and Stone & Webster. *TT 0.5: SP 0.5.*—Aug. 1916 to Aug. 1917 Designer of fixed and movable bridges, with Ernest W. Wiggin, Cons. Engr., New Haven, Conn. *TT 1: P 1: D 1.*—Aug. 1917 to Nov. 1919 Capt., U. S. Army, A. E. F., survey, orientation, heavy railroad artillery, Instructor, Adj. and Secy. for O. & T. C. T. A. No. 3, A. R. Administration, transportation, etc. *TT 1.9: SP 0.4: P 1.5: RC 1.5.*—March 1920 to Feb. 1923 Vice-Pres., American Trading & Development Co., on survey and negotiations for water power and mining concessions in Caucasus, Russia. *TT 2.9: P 2.9: RC 2.9: D 0.3.*—Feb. to Oct. 1923 housing, feeding, sanitation and evacuation of 20000 refugees, Constantinople. *TT 0.7: P 0.7: RC 0.7.*—Dec. 1923 to June 1924 in private practice, plans and specifications for small buildings, Philadelphia. *TT 0.7: P 0.7: RC 0.7: D 0.7.*—June 1924 to June 1927 Asst. Engr., Reading Co., Philadelphia, Pa., on design of structures. *TT 3: P 3: RC 0.5: D 2.5.* June 1927 to date Supervising Draftsman, Designing Engr. and then Asst. Office Engr., Philadelphia improvements, Pennsylvania R. R. *TT 1.7: P 1.7: RC 1.7: D 1.* *TT 16.4: SP 0.9: P 15.5: RC 8: D 5.5.* Refers to R. Farnham, H. H. Hatch, S. H. Noyes, T. P. Watson, E. W. Wiggin.

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(1) **AUSTIN, HERBERT ASHFORD ROBERTSON**, Assoc. M., 508 Staugenwald Bldg., Honolulu, Hawaii. (Elected Junior April 17, 1917; Assoc. M. Sept. 12, 1921.) (Age 39. Born Hilo, Hawaii.) 1913 C. E., Cornell Univ. *TT 4: P 4.*—Summer 1912 Laborer, New York Highway Dept., being Inspector (2 months).—Aug. to Dec. 1913 Asst. Engr., Hawaii Loan Fund Comm., being Instrumentman on highway work, office computations; designed 40-ft.

concrete bridge plans specifications. *TT 0.4: P 0.4: RC 0.3: D 0.2.*—Dec. 1913 to June 1918 with U. S. Geological Survey, Water Resources Branch, 2 months as Field Asst. on computations and field work, Honolulu; $3\frac{1}{2}$ years Jun. Engr., being Acting Office Engr. (1914, 6 months), and in charge of field operations, Maui and Oahu Islands, constructed six gauging stations (Jan. 1915 to June 1917); after July 1917 Asst. Engr., Div. of Hydrography, Hawaii, in charge of all field work, Hawaii, Maui and Molokai Islands, constructed fifteen gauging stations on streams and ditches at Wailuka, Maui. *TT 4.5: P 4.5: RC 3.5: D 1.*—June to Dec. 1918 1st Lieut., Engrs., U. S. Army; from July to Oct. student, E. O. T. S., Camps Lee and A. A. Humphreys, Va.; about 1 month with Co. K, 3d Engr. Tr. Regt., then with 9th Engr. Tr. Regt., at Camp Fremont. *TT 0.5: P 0.5: RC 0.2.*—Jan. to Sept. 1919 Asst. Engr., Div. of Hydrography, Hawaii, in charge of stream gauging, Hawaii, Maui and Molokai Islands, construction of four and reconnaissance for several stations, Molokai; after July Engr., U. S. Geological Survey, Water Resources Branch, and Field Engr., Div. of Hydrography, Hawaii, in charge of all field work on five islands. *TT 0.7: P 0.7: RC 0.7: D 0.3.*—Sept. 1919–April 1924 with City and County of Honolulu, until March 1920 as Asst. Engr. in charge of preliminary investigations for \$800 000 street improvement (business district), Honolulu; after March 1920 being First Asst. City and County Engr. in charge of drafting room and design of plans and specifications for street and highway work; also in charge of inspection of new work; Nov. and Dec. 1923 Acting City and County Engr. *TT 4.6: P 4.6: RC 4.6: D 4.6.*—May 1924–June 1925 Civ. Engr., Ewa Plantation Co., in charge of field surveys, for 7 500-acre sugar plantation, construction of sewer systems for laborers camps, relocation and construction of ditch ($1\frac{1}{2}$ miles), inspection of building construction and in charge of miscellaneous engineering problems. *TT 1.2: P 1.2: RC 1.2: D 1.2.*—July 1925–Dec. 1926 Asst. Chf. Engr., Honolulu Sewer & Water Comm., in charge of investigation plans and specifications for water and sewer projects (\$3 000 000). *TT 1.5: P 1.5: RC 1.5: D 1.5.*—Jan. 1927–Dec. 1928 Chf. Engr., Dept. of Public Works, City and County of Honolulu, on plans, surveys and improvements, road maintenance, street cleaning and garbage, water-supply and sewers, Bureau of Water Revenue, completed street, water and sewer improvements (\$6 000 000), metered city. *TT 2: P 2: RC 2: D 2.*—Jan. 1929 to date Cons. Civ. and Hydr. Engr. *TT 0.1: P 0.1: RC 0.1: D 0.1.*—*TT 19.5: P 19.5: RC 14.1: D 10.9.* Refers to G. M. Collins, B. H. Eveleth, A. R. Keller, G. K. Larrison, F. Ohrt, W. H. Popert, R. Quinn, S. W. Tay, R. R. Tinkham, E. C. Wilder.

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(1) **BLANK, ALBERT STEIN**, Assoc. M., 66 Malone Ave., Belleville, N. J. (Elected Nov. 15, 1926.) (Age 36. Born Allentown, Pa.) 1915 C. E., Lehigh Univ. *TT 4: P 4.*—June to Oct. 1915 Asst. to City Engr., Allentown, Pa., road construction and laying out and grading streets. *TT 0.3: P 0.3.*—Oct. 1915 to Jan. 1917 Transitman and Chf. of Party, Lehigh Valley R. R., Bethlehem, Pa., being Field Engr. on dock construction, waterway excavation, track layouts and surveys. *TT 1.2: P 1.2.*—1917 Designer at Pittsburgh, Pa., until June with Pennsylvania R. R. Co., on reinforced-concrete structures for grade-crossing elimination, then with Wm. B. Scalfie & Sons Co., on commercial water-purification plants. *TT 1: P 1: D 1.*—Dec. 1917 to March 1919 2d Lieut., Ballistic Eng. Sec., Ordnance Dept. U. S. Army, testing high explosives at Hercules Powder Co. and government explosive plant "C" on proving grounds. *TT 1.3: P 1.3.*—March 1919 to July 1920 Commission Merchant, Excelsior Shoe Co., Pittsburgh. July 1920 to Jan. 1923 Instructor, in charge, Mech. Drawing and Machine Design, Allegheny Vocational School for Wounded Ex-Service Men, N. S. Pittsburgh, in charge of organization of material and class instruction. *TT 2.5: P 2.5: RC 2.5.*—Jan. 1923 to Jan. 1924 City Engr., Rahway, N. J., in charge of streets, sewers, garbage removal, Water Dept., street cleaning and building construction. *TT 1: P 1: RC 1: D 1.*—Jan. 1924 to date Town Engr. and Supt. of Constr., Belleville, N. J., in charge of streets, sewers, garbage removal, Bldg. and Purchasing Depts. *TT 5.3: P 5.3: RC 5.3: D 5.3.*—*TT 16.6: P 16.6: RC 8.8: D 6.3.* Refers to R. J. Fogg, H. W. Heilmann, E. S. Rankin, G. R. B. Symonds, W. G. Taylor, J. R. Van Duyne.

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(10) **BRIER, BURGESS BUELL**, Assoc. M., 622 Goodwyn Inst. Bldg., Memphis, Tenn. (Elected Oct. 8, 1918.) (Age 38. Born Rankin, Ill.) 1912 B. S. in C. E., and 1918 C. E., Purdue Univ. *TT 4: P 4.*—July 1912 Timekeeper, Stone & Webster Eng. Corporation of Maine. Aug. 1912 to May 1913 Chairman, Illinois Central R. R. *TT 0.5: SP 0.5.*—June 1913 to Dec. 1915 (except Aug. to Oct. 1914 Inspector, Eng. Dept., Memphis, on reinforced concrete sewers, culverts and levee wall) with U. S. Engr. Office, Memphis, Tenn., as Surveyman on topographic and hydrographic surveys and mapping of Mississippi River and (after Nov. 1914) Chf. of Party, under Jun. Engr. in charge. *TT 1.8: SP 0.7: P 1.1.*—Jan. to April 1916 preparing for examination for U. S. Jun. Engr. and 2d Lieut., Corps of Engrs., U. S. Army. May to Nov. 1916 Jun. Engr., Illinois State Highway Dept., Bridge Dept.,

being Assembler and Checker and in field on bridge and road work. TT 0.5: P 0.5.—Dec. 1916 to July 1918 Surveyman and U. S. Jun. Engr. in charge of surveys, office and field, U. S. Engr. Office, 1st and 2d Dist., Mississippi River Comm., Memphis. TT 1.7: P 1.7: RC 1.7.—July 1918 to date with Morgan Eng. Co., Memphis, as follows: July to Aug. 1918 Chf. of Party on location survey, Murphy Bayou Drainage Dist., Washington County, Miss.; Sept. 1918 to May 1927 Office Engr. on drainage and flood-protection, until Dec. 1922 in charge of cost accounting on profit-sharing construction contracts, also on mapping, profiles and computations, then in charge of Drafting and Computing Depts., covering preliminary investigations, design, plans and cost estimates; since June 1927 Asst. Engr. on preliminary investigation, design, plans, estimates, etc. for Levee Improvement Dist. No. 7, Dunklin County, Mo., and for irrigation system (to irrigate 2 500 acres), Three Rivers, Tex., also investigation, design, estimates, plans and report on Mississippi River diversion through St. Francis Basin, detailed review of design, plans, estimates and specifications, LaSalle County (Tex.) Water Improvement Dist. No. 1 (to irrigate 104 000 acres) and examination and preliminary design, Willacy County Water Control and Improvement Dist. No. 1, Lower Rio Grande Valley (to irrigate 129 000 acres). TT 10.7: P 10.7: RC 8.4: D 4.8.—TT 19.2: SP 1.2: P 18: RC 10.1: D 4.8. Refers to H. S. Gladfelter, W. K. Hatt, L. L. Hiding, W. A. R. Parkin, B. A. Ross, N. H. Sayford, F. Tarrant, H. A. Wiersema.

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(1) **BURGOYNE, JOHN HENRY**, Assoc. M., Campo Quijano, Provincia de Salta, Argentine Republic. (Elected Junior Sept. 1, 1903; Assoc. M. Dec. 5, 1906.) (Age 50. Born Fall River, Mass.) 1902 C. E., Rens. Pol. Inst. TT 4: P 4.—Jan. to Dec. 1898 Rodman, Erie & Central New York R. R. TT 0.5: SP 0.5.—Summer 1901 Transitman on railroad location, Amsterdam to Johnstown, N. Y. July to Dec. 1902 Transitman, and Dec. 1902 to May 1903 Asst. Engr., Erie R. R., Hornellsville and Buffalo, N. Y. TT 0.9: P 0.9: RC 0.5: D 0.5.—May to July 1903 in office of Div. Engr., New York Central R. R., Buffalo. TT 0.1: SP 0.1.—Aug. 1903 to May 1906 Asst. Engr., Buffalo & Susquehanna R. R., until Jan. 1904 on maintenance of way, then in office of Chf. Engr. successively in charge of betterment surveys, Wellsville, N. Y., of party on location of line (7 miles) to coal mines at Plumville, Pa., and of cut-off (8 miles) Corbett to Cross Fork Junction, of masonry for bridges and (after Jan. 1906) of engineering work on Buffalo Div. TT 2.8: P 2.8: RC 2.8: D 2.8.—June 1906 to May 1907 Locating Engr., Arica-La Paz Ry., Arica, Chile. TT 0.9: P 0.9: RC 0.9: D 0.9.—June 1907 to May 1908 with Speyer & Co., on railroad construction in Bolivia, 6 months on location and 5 months Supt. of Masonry. TT 0.9: P 0.9: RC 0.9: D 0.9.—June 1908 to March 1909 Div. Engr., Huancayo Extension, Central Ry. of Peru. TT 0.7: P 0.7: RC 0.7: D 0.7.—April to Aug. 1909 on expedition to Amazon with F. Jekyll. TT 0.2: SP 0.2.—Sept. 1909 to May 1910 in charge of narrow-gauge railroad location to mines of Vanadium Co., Peru. TT 0.7: P 0.7: RC 0.7: D 0.7.—June 1910 to July 1911 in charge of party on railroad location, Chanchamayo, Peru, for Arthur Koppel. TT 1.1: P 1.1: RC 1.1: D 1.1. Aug. 1911 to June 1912 with Peruvian Corporation in charge of river defense on Chimbote Ry. TT 0.9: P 0.9: RC 0.9: D 0.9.—July 1912 to June 1913 in charge of resurvey, Central Ry. of Peru. TT 1: P 1: RC 1: D 1.—Aug. 1913 to Feb. 1914 in charge of party on railroad location, Cerro de Pasco Ry. to the Amazon. TT 0.6: P 0.6: RC 0.6: D 0.6.—March to June 1914 in charge of location of cut-off, Morococha to Pachachaca, Peru. TT 0.3: P 0.3: RC 0.3: D 0.3.—July 1914 to June 1915 contracting in mines, Cerro de Pasco Co. TT 0.5: SP 0.5.—June 1915 to July 1916 Chf. Engr. Morococha Min. Co. TT 1: P 1: RC 1: D 1.—July 1916 to Aug. 1918 on various engineering works for sugar estates in Peru. TT 2: P 2: RC 2: D 2.—Aug. 1918 to Sept. 1920 Locating and Constr. Engr. for S. I. Patino on railroad, Machacamarea to Uncia, Bolivia. TT 2: P 2: RC 2: D 2.—April 1921 to April 1922 Engr., Ulen & Co., until June 1921 on sewer work, Cochabamba, then on railroad location, Atocha to Tupiza, Bolivia. TT 1.1: P 1.1: RC 0.4: D 0.4.—April to Aug. 1926 in charge of road construction, Standard Oil Co., Camatindi, Bolivia. TT 0.4: P 0.4: RC 0.4: D 0.4.—May 1922 to Oct. 1925 and April 1927 to date Locating Engr., Argentine State Rys., on line, Salta to Chile. TT 5.3: P 5.3: RC 5.3: D 5.3.—TT 27.9: SP 1.3: P 26.6: RC 21.5: D 21.5. Refers to A. B. Bentzon, J. B. Cameron, H. J. Deutschbein, J. W. Doty, F. J. Hettman, R. F. Maury.

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(11) **HARPER, EARLE GENE**, Assoc. M., March Field, Riverside, Cal. (Elected Feb. 25, 1924.) (Age 39. Born Mechanicsburg, Ohio.)—June 1908 to April 1909 chain, level, recording and sounding work on diversion channel project, U. S. Engr. Dept., Puget Sound Dist. TT 0.4: SP 0.4.—May-Dec. 1909 rod, chain and instrument work, Pile Driver and Dredger Inspector on construction of Tacoma (Wash.) Terminal, Chicago, Milwaukee & St. Paul Ry. Co., also Rodman and Leveler. TT 0.3: SP 0.3.—Jan. 1910 to July 1912 on farm subdivision, city lot surveys, irrigation, drainage and power line survey work in Washington,

Oregon and California for various concerns. *TT 1.2: SP 1.2.*—July 1912-Aug. 1917 with California Highway Comm. as Rodman, Instrumentman, Asst. Res. Engr. and Supt. on reconnaissance, location, construction and maintenance of highways. *TT 5.2: P 5.2.*—Sept. 1917 to date 1st Lieut. and Capt., Officers' Reserve Corps (during World War); July 1920 to Aug. 1928 1st Lieut., Infantry, and Aug. 1928 to date Capt., Air Corps, U. S. Regular Army. *TT 11.6: P 11.6: RC 11.*—*TT 18.7: SP 1.9: P 16.8: RC 11.* Refers to W. S. Caruthers, G. E. Edgerton, J. H. Harvell, H. A. Seran, T. E. Stanton, Jr., A. J. Wagner, S. C. Whipple.

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(1) **HERZIG, SOLON**, Assoc. M., 415 Lexington Ave., New York City. (Elected Jun. Oct. 1, 1913; Assoc. M. June 23, 1916.) (Age 44. Born New York City.) 1910 C. E., Pol. Inst. of Brooklyn. *TT 4: P 4.*—1901 to 1902 Blueprint Boy and Tracer, Jackson Architectural Iron Works. *TT 0.4: SP 0.4.*—1902 to 1905 Inspector, drafting and estimating with E. W. Stern, Cons. Engr. *TT 1.5: SP 1.5.*—1905 to 1906 Draftsman, Inspector and Asst. with Welskopf & Stern, Cons. Engrs. *TT 0.5: SP 0.5.*—1910 to 1911 Draftsman, Inspector, some designing, superintendence, with Pierson & Goodrich, Engrs. and Contrs., New York. *TT 0.5: SP 0.5.*—1911 to 1912 Asst. to E. P. Goodrich, Cons. Engr. to Borough Pres. of Manhattan, Dept. of Public Works, special investigations and reports and assisted in design of steel structures. *TT 0.7: SP 0.2: P 0.5: RC 0.5.*—1913 to 1915 Engr., Montana Power Co., Butte, Mont., planned, designed and directed construction of extensive electric distribution system in Butte (1 year), made designs and directed enlargement of Hauser Lake power house and installation of 5 000-h.p. turbine, etc. (1 year). *TT 2: P 2: RC 2: D 1.*—May to Aug. 1915 Engr. for Real Estate Co. of Helena, Mont. *TT 0.3: P 0.3: RC 0.3.*—1915 to 1917 in private practice, mainly on structural steel and concrete design. *TT 2: P 2: RC 2: D 2.*—1917 to 1919 1st Lieut. and Capt., Corps of Engrs., U. S. Army. *TT 2: P 2: RC 2.*—1919 to 1923 Pres., Tilden & Herzig, Engrs. and Bldg. Contrs., general building contracting and engineering. *TT 4: P 4: RC 4: D 2.*—1923 to 1925 Pres., Herzig & Solomon, Inc., Engrs. and Contrs., on building construction. *TT 2: P 2: RC 2: D 1.*—May 1925 to May 1926 Gen. Mgr., Structural Steel Dept., J. Cutler Iron Works. *TT 1: P 1: RC 1.*—Oct. 1926 to date Cons. Structural Engr., mainly on building construction. *TT 2.3: P 2.3: RC 2.3: D 2.3.*—*TT 23.3: SP 3.1: P 20.2: RC 16.2: D 8.3.* Refers to W. Goldsmith, E. P. Goodrich, H. Nagin, E. J. Squire, E. W. Stern, J. F. Sullivan, W. H. Van Gieson, S. C. Welskopf.

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(5) **JAMES, EDWIN WARLEY**, Assoc. M., Bureau of Public Roads, Washington, D. C. (Elected July 2, 1913.) (Age 51. Born Ossining, N. Y.) 1901 A. B., Harvard Univ. 1905 to 1907 student, Civ. Eng. course, Massachusetts Inst. of Technology. *TT 3: P 3.*—Oct. 1900 to Aug. 1905 Asst. Head and Head, Dept. of Suggestion and Invention, Perry Mason Co., Boston, Mass., administrative work. *TT 2.4: P 2.4.*—March 1907 to May 1909 with Bureau of Public Works, Insular Govt. of Philippine Islands, until May 1908 as Asst. Civ. Engr. in charge (under Dist. Engr.) of field and office work for construction, then Dist. Engr. in responsible charge of design and construction, of roads, concrete and steel highway bridges, timber, masonry and concrete buildings, river improvement, artesian well drilling, etc. *TT 2.2: P 2.2: RC 1.1.*—Sept. 1909 to April 1910 Asst., Narragansett Dist., U. S. Engr. Corps, on surveys for proposed intracoastal canal, in charge of computations (under Jun. Engr.). *TT 0.7: P 0.7: RC 0.7.*—May 1910 to date with U. S. Bureau of Public Roads as follows: May 1910 to Jan. 1912 Highway Engr. in charge of design and construction of demonstration roads and road structures in Southern States, including concrete bridges, acted as Consultant to County and State road officials; Jan. 1912 to Feb. 1914 Senior Highway Engr., being Chf. Inspector, representing Chf. Engr. in field, and having general supervision of field engineers, on same work; had general charge of organizing field work and of field engineers on first State Aid road building; Feb. 1914 to Dec. 1916 Chf., Div. of Maintenance, in charge of experimental road maintenance on all test roads (over 600 miles); Dec. 1916 to June 1919 Gen. Inspector, representing Chf. Engr. in field, with supervisory authority over eastern half of United States under First Federal Aid Highway Act, also on Committee to organize Bureau, draft rules and regulations, instruct state officials, etc., as to Federal Aid; June 1919 to June 1921 Asst. Chf. Engr. in general charge of all office engineering for reviewing Federal Aid highway plans submitted by State Highway Depts. and for recommending allotments (about \$75 000 000 annually); detailed review of specifications, estimates, etc., of all Federal Aid work; development of standard highway plans and specifications; since June 1921 Chf., Div. of Design, in charge of all Federal Aid highway design, passing and recommending for approval by the Secy. of Agriculture and including roads and bridges, specifications for same, standard specifications and standardized work; design and layout of Federal Aid system of roads; Representative of Bureau of many

professional committees and boards. *TT 19: P 19: RC 19: D 13.7.*—*TT 27.3: SP 2.4: P 24.9: RC 20.8: D 13.7.* Refers to C. D. Avery, H. K. Bishop, C. D. Curtiss, L. A. Jones, E. F. Kelley, A. B. McDaniel, V. M. Peirce, G. A. Ricker.

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(6) **McCONNELL, EDWARD HERBERT**, Assoc. M., Pineville, W. Va. (Elected March 13, 1917.) (Age 50. Born Natural Bridge, Va.) Certified Prof. Engr., State of Virginia. Jan. to July 1916 student, special course in structural and reinforced concrete engineering, Univ. of Virginia. 1928 Certificate, miscellaneous concrete structures, Wilson Eng. Corporation.—Jan. 1900 to Aug. 1902 Rodman and Instrumentman, West Virginia Central & Pittsburgh R. R. *TT 1.3: SP 1.3.*—Aug. 1902 to Jan. 1903 Instrumentman, Chesapeake & Ohio Ry. *TT 0.2: SP 0.2.*—Feb. 1903 to May 1908 Instrumentman, Locating Engr. and Res. Engr., Virginian Ry. *TT 4.6: SP 0.6: P 4: RC 4.*—Aug. 1908 to Oct. 1909 Contr. Engr., Roanoke Bridge Co. *TT 1.2: P 1.2: RC 0.6: D 0.6.*—Oct. 1909 to Nov. 1911 general engineering, Roanoke, and (8 months) Locating Engr., National Rys., Haiti. *TT 2.1: P 2.1: RC 1.1: D 1.*—Nov. 1911 to Sept. 1914 Engr., Roadway and Track, Roanoke Ry. & Elec. Co., and Lynchburg Traction & Light Co. *TT 2.8: P 2.8: RC 1.8: D 1.*—Sept. 1914 to Oct. 1915 Senior Asst. Engr., Szechuan Hankow Ry., Ikwie Sec. *TT 1.1: P 1.1: RC 0.6: D 0.5.*—Aug. 1916 to May 1917 Locating Engr., N. C. & St. L. Ry. *TT 0.7: P 0.7: RC 0.7.*—Sept. 1917 to Aug. 1919 1st Lieut. and Capt., Engrs., Reserve Corps, 1st Replacement Regt., 1st Army, Artillery, R. A. R., and 128th Battalion Engrs. *TT 1.9: P 1.9: RC 1.9.*—Jan. 1920 to Jan. 1921 Engr. Supt., Highway Constr. Co., Erie, Pa. *TT 0.5: SP 0.5.*—Jan. 1921 to Jan. 1924 County Engr., Floyd County, Va. *TT 3: P 3: RC 1.5: D 1.5.*—Jan. 1924 to date member of firm, McConnell Bros., Engrs., on highway work in Washington, Franklin, Patrick and Wythe Counties, Va., streets, sewers and bridges, Town of Vinton, Va., etc., since April 1928 also Locating and Res. Engr., Virginian & Western Ry. (Virginia Ry.). *TT 5.3: P 5.3: RC 3: D 2.3.*—*TT 24.7: SP 2.6: P 22.1: RC 15.2: D 6.8.* Refers to C. J. Carroll, J. E. Crawford, F. F. Harrington, C. P. Howard, R. W. Randolph, A. M. Traugott.

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(5) **MATTISON, GEORGE CARL**, Assoc. M., Washington, D. C. (Elected April 25, 1921.) (Age 40. Born Minneapolis, Minn.) 1911 C. E., Univ. of Minn. *TT 4: P 4.*—June 1911 to date with U. S. Coast and Geodetic Survey as follows: June 1911 to Nov. 1917 Deck Officer, Aid, Asst., Jun. Hydrographic and Geodetic Engr., assisting in general surveys in Maine, Panama, Alaska, Hawaii and Philippine Islands; June 1919 to Jan. 1920 Jun. Hydrographic and Geodetic Engr. in command of steamer *Hydrographer* on hydrographic surveys near Key West, Fla.; since Jan. 1920 Hydrographic and Geodetic Engr., until Nov. 1923 on investigation of methods of mapping from aerial photographs, and in charge of field surveys and office compilations of aerial projects on New Jersey Coast and Mississippi River Delta, Dec. 1923 to April 1928 in command of steamer *Ranger* on surveys in Virgin Islands (1 year) and Porto Rico and Virgin Islands, New Jersey and Florida, compiling records, etc., since April 1928 in command of steamer *Lydonia* on general surveys on coasts of Maine and Florida, and compiling records. *TT 14.5: SP 1: P 13.5: RC 9.2: D 3.8.*—*TT 18.5: SP 1: P 17.5: RC 9.2: D 3.8.* Refers to R. L. Faris, F. H. Hardy, J. H. Hawley, E. H. Pagenhart, W. E. Parker, R. S. Patton, P. C. Whitney.

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(1) **MENDELSON, ISADOR WILLIAM**, Assoc. M., 15 West Eleventh St., New York City. (Elected Oct. 15, 1923.) (Age 34. Born New York City.) 1917 B. S., and 1928 C. E., Univ. of Wis. *TT 4: P 4.*—Sept. 1917 to July 1920 Chemist and San. Engr., 1 year with City of Worcester, Mass., compiling tables, collecting data and observing operation of activated sludge experimental plant, lime-treatment and sedimentation and sand-filtration of city sewage, chemical analyses of sewage and sludge, and after Oct. 1918 with North Dakota Public Health Laboratories, Univ. of North Dakota, Grand Fork, N. Dak., investigating, examining plans and drafting regulations for public water-supply and sewage-disposal systems, investigating water-softening and milk and cream pasteurization plants, and stream pollution nuisances, analyses of water, milk and cream, etc. *TT 2.7: P 2.7: RC 1.7.*—July 1920 to date with U. S. Public Health Service as follows: July 1920 to Oct. 1923 Asst. and Associate San. Engr., in charge of Interstate San. Dist. No. 2 on public water-supply and sewage-disposal investigations, having supervision over water supply on trains and vessels, being Asst. to Chf. of Domestic Quarantine Div., Washington, D. C.; also Founder and Editor of Public Health Engineering Abstracts and Corresponding Secy., Conference of State San. Engrs.; since Oct. 1923 on similar work, being Asst. San. Engr. (Oct. 1923 to March 1924) and Associate San. Engr. (March 1924 to Feb. 1926), Interstate San. Dist. Nos. 5 and 6, work also including design, supervision of construction and operation of water-works and sewerage systems in national parks; from Feb. 1926 to July 1928 in charge of Interstate

San. Dist. No. 3, including design of water-works and sewerage systems for Indian Service, Veterans' Bureau and U. S. Bureau of Fisheries and emergency relief work; and since July 1928 with Interstate San. Dist. No. 1, also on design of water-works and sewerage systems for U. S. Coast Guard. *TT 8.7: P 8.7: RC 6.1: D 3.4.—TT 15.4: P 15.4: RC 7.8: D 3.4.* Refers to W. H. Dittoe, C. A. Emerson, Jr., L. M. Fisher, A. E. Gorman, H. W. Streeter, A. Wolman.

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(1) **SIMHAM, RASIPUR DASA NARA**, Assoc. M., Khaleel Bldgs., Mount Road, Madras, India. (Elected Aug. 4, 1924.) (Age 33. Born Salem, India.) 1918 B. E., Madras Univ. 1919 M. E., Govt. Coll. of Eng., Madras. *TT 4: P 4.* 1918 to 1919 Apprentice Engr., Govt. Public Works, Madras, directing and supervising work in workshops, being responsible for design and construction of 5-ton mechanical crane, number of trusses, compound girders, bridges, irrigation sluices and shutters, etc. *TT 1: P 1: D 1.* 1919 to 1920 Local Fund Asst. Engr., and Personal Asst. to Dist. Board Engr., Chingleput, Madras, in charge of subdivision (Chingleput), on investigation and execution of several highways and bridges and causeways, in responsible charge of all Local Fund works, including construction of Taluk and Union Board office buildings, dispensaries, hospitals, schools, etc. *TT 1: P 1: RC 1: D 1.* 1920 to date with Govt. of Madras, until 1924 as Public Works Asst. Engr., Sivaganga Zemindary, Court of Wards, in responsible charge of several irrigation tanks and reservoirs, restoration and reconstruction schemes, canal projects, regulators, weirs, syphons, aqueducts, etc., construction and reconstruction of number of temples, palace works, bungalows, office buildings, etc., palace electrical power station charge of design and construction, installation and supervision of operation of plant, etc.; highway projects, reinforced concrete structural works, etc.; 1924 to date Town Planning Asst., advising municipalities and local bodies in town planning, extension and improvement, assisted in civic survey of Vizagapatnam, India; and (since 1925) had responsible charge of several civic surveys of municipalities in the Presidency. 1925 (part of time) also Officiating Director of Town Planning, being Advisor to municipalities, local boards in Presidency of Madras and Madras City Corporation and to Govt. of Madras. *TT 8.5: P 8.5: RC 8.5: D 8.5. TT 14.5: P 14.5: RC 9.5: D 10.5.* Refers to H. G. Howard, G. B. E. Truscott. (Applies in accordance with Sec. I, Art. I, of the By-Laws.)

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(9) **SKARDON, KENNETH BRUNER**, Assoc. M., Aurora, Ohio. (Elected March 15, 1926.) (Age 34. Born Springfield, Ohio.) 1921 S. B., and 1925 S. M., Mass. Inst. Tech. *TT 4: P 4.—Aug. 1917 to June 1919 2d Lieut. and 1st Lieut., Field Artillery, U. S. Army, in charge of fire control for battery of 155m.m. howitzers. TT 1.8: P 1.8.—July to Sept. 1919 Asst. Highway Engr., Ohio State Highway Dept., being Chf. of field party on surveys. —Summer 1920 Senior Eng. Asst., Comm. for Investigation of Additional Water Supply for Commonwealth of Massachusetts, being Chf. of field party on hydraulic field investigations.—Aug. to Oct. 1921 Aeronautical Structural Engr., U. S. Army, Air Service, structural analysis of airplane frames. TT 0.2: P 0.2.—Nov. 1921 to Feb. 1923 Asst. Engr., U. S. R. R. Administration, adjustment of under-maintenance claims. TT 1.3: P 1.3: RC 0.3. —March to June 1923 private work on subdivision development in Dayton, Ohio; made plat, designed and supervised improvements for 3-acre allotment. TT 0.3: P 0.3: RC 0.3. —July 1923 to March 1927 Structural Engr., until March 1924 with Hugh J. Baker Co., Indianapolis, Ind., detailed and designed structural steel and reinforced concrete building frames, and after April 1924 with Cleveland (Ohio) Union Terminals Co., designed and had charge of plans for Ontario St. retaining walls and subway, analysis of stresses, developed short empirical method and made preliminary design for Cuyahoga Viaduct girder spans; designed, checked or had charge of detailing numerous other structures, etc. TT 3.7: P 3.7: RC 2.7: D 3.2.—April 1927 to date Designing Engr., Wendell P. Brown Co., Cons. Engrs., on railroad and highway bridges, buildings, etc. TT 2: P 2: RC 2: D 2.—TT 13.5: P 13.5: RC 5.3: D 5.2. Refers to W. P. Brown, A. W. Buel, F. L. Gorman, B. R. Leffler, C. P. Marsh.*

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(9) **SOWERS, GEORGE BLOOMER**, Assoc. M., 618 City Hall, Cleveland, Ohio. (Elected June 7, 1926.) (Age 36. Born Lexington, Ohio.) 1913 B. S. in C. E., Case School of Applied Sci. *TT 4: P 4.*—1 year student, Ohio Wesleyan Univ.—Summer 1911 Asst. Engr., City Engr.'s office, Mansfield, Ohio, on drafting, survey work and sewer design. Summer 1912 Asst. Engr., J. A. Hursh & Son, Mansfield, on house and factory building design and surveying.—May to Sept. 1913 Draftsman, W. J. Watson Co., Cleveland, Ohio, bridge work. *TT 0.2: SP 0.2.*—Aug. 1913 to date with City of Cleveland, as follows: Aug. 1913 to Jan. 1918 Asst. Engr., Subdivision of Sewage Disposal, on sewage-testing station work, studying settling tanks, filters, etc., general design of sewage-treatment works, hydraulic

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computations, sewer design, supervision of construction, etc.; 1918 to 1920 Senior Asst. Engr. in charge of sewer designing and drafting room, Div. of Eng. and Constr.; 1920 to 1922 Engr., being Asst. to Chf. Engr., sewer designing, in charge of division drafting room, specifications for sewers, special investigations and report to Chf. Engr.; since 1922 Deputy Commr., Div. of Eng. and Constr., in charge of general office and design, preparing specifications and supervising design of sewers, pavements, small sewage-disposal plant, sewage-pumping plant, culverts, etc., also specifications for garbage-disposal plant, and equipment and material for maintenance and repair of sewer and bridges; contracts for construction of sewers, pavements, etc., designed by division, and assisting Commr. in supervision of work and in studying plans and projects reported upon. *TT 15.2: SP 0.2: P 15: RC 12: D 14.*—*TT 19.4: SP 0.4: P 19: RC 12: D 14.* Refers to G. B. Gascoigne, R. Hoffmann, J. E. A. Linders, G. H. Tinker, W. J. Watson.

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(15) WILLIAMS, RICHARD GILES, Assoc. M., State Highway Dept., Austin, Tex. (Elected Nov. 25, 1919.) (Age 41. Born New York City.) April 1906 to Sept. 1908 Chairman to Leveler, Grand Trunk Pacific Ry. Co. *TT 1.2: SP 1: P 0.2.*—Nov. 1908 to Aug. 1909 Foreman of concrete and excavation on canal construction, Fort Orange Constr. Co., Albany, N. Y. *TT 0.4: SP 0.4.*—Sept. 1909 to April 1911 Chairman to Leveler, New York State Engr. Dept., Albany, in charge of surveys, acting as Masonry Inspector, Gen. Eng. Asst. and Draftsman, and April 1911 to June 1917 Leveler and Asst. Civ. Engr., New York State Highway Dept. in charge of survey, design and construction. *TT 7.8: P 7.8: RC 6.8: D 6.2.*—July 1917 to March 1918 Asst. Div. Engr., Wisconsin Highway Comm., Madison, Wis., in charge of surveys and design of highways for Federal Aid work. *TT 0.7: P 0.7: RC 0.7: D 0.7.*—April 1918 to Feb. 1920 with E. F. Petersen, Texarkana, Ark., as Project Engr. in charge of 45 miles of highways and numerous large concrete bridges, Road Dist. No. 1, Forrest City, Ark. *TT 1.8: P 1.8: RC 1.8: D 1.8.*—Feb. 1920 to March 1928 Highway Engr. and Assoc. Highway Engr., U. S. Bureau of Public Roads, supervising design, construction and maintenance of highways. *TT 8: P 8: RC 8: D 8.*—March 1928 to date Engr.-Supt. of Aid Projects, Texas State Highway Dept., in responsible charge of construction and engineering expenditures (about \$25 000 000 annually). *TT 1: P 1: RC 1: D 1.*—*TT 20.9: SP 1.4: P 19.5: RC 18.3: D 17.7.* Refers to P. H. Everett, G. Gilchrist, J. M. Howe, E. F. Petersen, R. A. Thompson, M. C. Welborn, G. G. Wickline.

FROM THE GRADE OF JUNIOR

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(5) BRYANT, CHARLES BYRN, Jun., 3206 Howard Park Ave., Baltimore, Md. (Elected Dec. 14, 1925.) (Age 28. Born Washington, D. C.) 1922 B. S. in Chemistry, School of Eng., Johns Hopkins Univ. *TT 4: P 4.*—June 1922 to date Field Engr., Portland Cement Association, on research, testing and educational work for concrete construction, including investigation of concrete masonry walls in school buildings, Baltimore, Md.; report on methods of use and properties of concrete in Montebello filters, Baltimore; giving lectures, demonstrations, laboratory instruction, etc. at Johns Hopkins Univ., State Dept. of Health, Maryland, Washington Suburban San. Dist., Baltimore & Ohio R. R., etc.; assisting engineers and architects in concrete specifications, studies of concrete aggregates, etc., and on construction projects including sewage-treatment works, filter plants, buildings, piers, dams, bulkheads and bridges, interpreting and enforcing specifications; also assisting manufacturers of concrete products on revision of production methods, design and revision of plant layouts and experimental operation and testing; co-operative work with building officials on preparation, revision and enforcement of building code. *TT 6.6: P 6.6: RC 4.8.*—*TT 10.6: P 10.6: RC 4.8.* Refers to C. K. Allen, A. E. Christliff, W. P. Darwin, E. M. Frost, G. L. Hall, H. R. Hall, C. S. Kimball, H. G. Perring, G. A. Ricker.

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(15) CLASSEN, ASHLEY GREEN, Jun., P. O. Box 2246, Lubbock, Tex. (Elected July 11, 1927.) (Age 25. Born Pleasanton, Kans.) 1924 B. S. in C. E., Univ. of Kans. *TT 4: P 4.*—Summer 1921 Flagman and Chairman, U. S. Gen. Land Office, Helena, Mont.—Summer 1922 Inspector and Instrumentman, Kansas State Highway Dept., at LaCygne, Kans.—Summer 1923 Inspector and Res. Engr., and June to Aug. 1924 Asst. Engr. with Black & Veatch, Cons. Engrs., Kansas City, Mo. *TT 0.2: P 0.2.*—Aug. 1924 to March 1925 Office Engr., The Monolith Bldrs., Inc., Kansas City, Mo., and Little Rock, Ark., on design of reinforced concrete structures, estimating and supervision. *TT 0.6: P 0.6: RC 0.6: D 0.6.*—March 1925 to Aug. 1926 Asst. Office Engr., Party Chf., design and general engineering with Myers & Noyes, Cons. Engrs., Dallas, Tex. *TT 1.4: P 1.4: RC 1: D 1.4.*—Aug. 1926 to date Sales Engr., Western Metal Mfg. Co., Houston, Tex., advisory, design and consulting

work on irrigation, drainage and highway and railway drainage problems. *TT 2.6: P 2.6; RC 2.6: D 2.6.*—*TT 8.8: P 8.8; RC 4.2: D 4.6.* Refers to C. T. Baer, W. A. French, H. W. Gregory, T. C. Mitchell, Jr., H. N. Roberts, H. E. Spickard.

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(4) **DOWNS, ERNEST WALDO**, Jun., 104 West State St., Trenton, N. J. (Elected Jan. 14, 1924.) (Age 27. Born Danbury, Conn.) 1923 C. E., Cornell Univ. *TT 4: P 4.*—July to Sept. 1923 Engr., Danbury & Bethel Gas & Elec. Light Co., on layout of gasholder and benches of coke ovens, surveying for 3-mile extension of gas mains and mapping Company's property and equipment. *TT 0.2: P 0.2.*—Oct. 1923 to Dec. 1926 Jun. Engr., U. S. Geological Survey, until Sept. 1924 with Surface Water Branch, Boston district, on construction and maintenance of stream-flow measuring stations, collecting and assembling stream-flow data, then with Underground Water Div., New Jersey, on construction and maintenance of tidal gauges and water-level recorders on artesian wells, mapping catchment areas, collecting data on water levels in wells and tidal effects, computing capacities of well-field regions, etc. *TT 3.1: P 3.1; RC 1.7.* Dec. 1926 to date Engr., John A. Roebling's Sons Co., Trenton, N. J., on investigation of design and properties of wire-rope fittings and design of light highway suspension bridges, estimating and preliminary design for bid on Hudson River Bridge contract, design of erection equipment, and in charge of models for investigation of erection conditions during construction of cables for Hudson River Bridge. *TT 2.3: P 2.3; RC 1.7: D 1.1.*—*TT 9.6: P 9.6; RC 3.4: D 1.1.* Refers to F. A. Barnes, E. W. Bowden, H. T. Critchlow, O. W. Hartwell, H. F. Hill, Jr., W. E. Joyce.

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(5) **DUNHAM, JOHN WETHERBEE**, Jun., 216 Bryant St. N. E., Washington, D. C. (Elected Jan. 15, 1923.) (Age 31. Born Rockport, Mass.) 1920 B. S. in Civ. Eng., and 1923 C. E., Tufts Coll. *TT 4: P 4.*—July 1920 to July 1921 and Sept. 1921 to April 1922 Structural Steel Detailer, until July 1921 with American Bridge Co., Pencoed (Pa.) Plant, then with New England Structural Co., Everett, Mass. *TT 0.8: SP 0.8.*—April 1922 to Dec. 1924 Highway Bridge Designer, Maine State Highway Comm., Augusta, Me., designed steel, concrete and wooden bridges, checked designs, prepared estimates, investigated bridges, acted as Res. Engr., inspected steel at shops. *TT 2.7: P 2.7; RC 2.7: D 2.7.*—Dec. 1924 to date Structural Engr., Office of Superv. Archt., Treasury Dept., Washington, D. C., on structural designs for post offices, hospitals and other Federal buildings, also occasional inspection trips. *TT 4.2: P 4.2; RC 4.2: D 4.2.*—*TT 11.7: SP 0.8: P 10.9; RC 6.9: D 6.9.* Refers to W. S. Anderson, C. L. Boyer, L. N. Edwards, F. C. Hilder, A. W. Santelmann, P. D. Sargent.

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(1) **HABERSHON, MATTHEW EDMUND**, Jun., Ferham Villa, Rotherham, Yorks, England. (Elected Dec. 14, 1925.) (Age 28. Born Rotherham, England.) 1920 B. Eng., also M. Eng., Sheffield Univ., England. *TT 4: P 4.*—Sept. 1920 to March 1922 Structural Eng. Draftsman, Constr. Dept., Dormon, Long & Co., Ltd., Middlesbrough, England, detailing, estimating and designing structural steelwork for workshops, buildings and bridges. *TT 1.2: SP 0.2: P 1.*—April 1922 to Sept. 1927 with Borough Engr.'s Dept., Rotherham Corporation, England, until Nov. 1924 as Jun. Eng. Asst., designing, setting out and supervising construction of roads, sewers and buildings, then Senior Eng. Asst., designing and supervising construction of Chantry Bridge and incidental works (£100 000) and Rawmarsh Road sewage-pumping station (1 500 000 gal.), supervising construction of Bow Bridge (£27 000); June 1925 to June 1926 also Cons. Engr., J. J. Habershon & Sons, Ltd., Holmes Mills, Rotherham, on design of reinforced concrete and brick warehouse (£9 000). *TT 5.5: P 5.5; RC 2.5: D 1.*—Oct. 1927 to date Civ. Eng. Asst., Borough Engr.'s Dept., Swansea Corporation, Wales, designing and supervising construction of Llansamlet sewage-pumping station (3 000 000 gal.). *TT 1.4: P 1.4; RC 1.4: D 1.4.*—*TT 12.1: SP 0.2: P 11.9; RC 3.9: D 2.4.* Refers to G. R. Collinson, J. Husband, O. J. Marstrand. (Applies in accordance with Sec. 1, Art. I, of the By-Laws.)

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(1) **SCHULTHEIS, ARTHUR**, Jun., 7144 Manse St., Forest Hills, N. Y. (Elected May 28, 1923.) (Age 29. Born New York City.) 1920 C. E., Rens. Pol. Inst. *TT 4: P 4.*—June 1920 to June 1921 Asst., Dept. of Mathematics and Surveying, Rensselaer Polytechnic Inst., taught classes. *TT 1: P 1.*—June 1921 to Jan. 1922 Asst. to Mech. Supt., White Sulphur Springs, Inc., on surveying, mapping, layout of water lines and general superintendence of carpenters and builders. *TT 0.5: P 0.5.*—Jan. to Sept. 1922 Engr. in office of Apparatus Engr., Western Union Telegraph Co., original design for parts of standard telegraphic equipment. *TT 0.7: P 0.7.*—Sept. 1922 to April 1925 with J. G. White Eng. Corporation, New York City, office work, determining areas, plotting pipe-lines, estimates of proposed hydro-electric projects, design and estimating on water power projects under construction. *TT 2.6: P 2.6.*—April 1925 to June 1926 with Sanderson & Porter, New York City, until Dec. 1925

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as Engr. on construction of Cheat Haven dam and power plant, design of construction plant, in responsible charge of concrete-testing laboratory, inspection of placing concrete and steel, line and grade work on piers for Tainter gates, and after Dec. 1925 on appraisal of Brooklyn City R. R., valuation of office buildings, car-barns, power-house and shops. *TT 1.2: P 1.2.*—June 1926 to date with Public Works Eng. Corporation, New York City (subsidiary of Federal Water Service Corporation) as Asst. to Valuation Engr., in responsible charge of appraisals of many water properties, preparation of rate schedules and working up data for rate cases before public service commissions; various general problems, involving rates and value of water properties. *TT 2.7: P 2.7: RC 2.7.—TT 12.7: P 12.7: RC 2.7.* Refers to E. R. Cary, C. T. Chenery, W. E. Hamilton, J. L. Harrop, F. Kurtz.

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(1) **SNYDER, BAIRD**, 3d, Jun., Middlesex, N. J. (Elected Oct. 21, 1924.) (Age 28. Born Lansford, Pa.) 1924 S. B., Mass. Inst. Tech. *TT 4: P 4.*—Aug. 1918 to April 1919 Chainman, Atchison, Topeka & Santa Fe Ry. *TT 0.4: SP 0.4.*—Summer 1923 Instrumentman, Philadelphia & Reading Coal & Iron Co. June to Sept. 1924 made investigation of coal property near Maracalibo, Venezuela, for syndicate in New York. Sept. to Dec. 1924 on mechanical work in Europe for various persons in New York. Jan. 1925 to March 1926 with Madeira Hill Coal Co., until July 1925 as Instrumentman, also on maps, and plans, etc., then Asst. Supt., Lawrence Colliery, in responsible charge of bank coal production and Gen. Asst. *TT 1.1: SP 0.3: P 0.8: RC 0.8.*—Aug. 1926 to date Pres., Snyder Eng. Co., on construction, railways, reservoirs, earthen and concrete structures, etc.; during 1927 on Delaware, Lackawanna & Western 4-track reconstruction, and at present on Canoe Brook reservoir, Summit, N. J. *TT 2.7: P 2.7: RC 2.7.—TT 8.2: SP 0.7: P 7.5: RC 3.5.* Refers to N. J. Beisel, H. C. Booz, W. E. Miller, F. S. Senior, C. M. Spofford.

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(4) **WOLF, RICHARD JARRETT**, Jun., 5956 North Lawrence St., Philadelphia, Pa. (Elected Feb. 25, 1924.) (Age 30. Born Philadelphia, Pa.) 1923 B. S. in C. E., Towne Sci. School, Univ. of Pa. *TT 4: P 4.*—July 1916 to Sept. 1918 and Jan.-Sept. 1919 Apprentice and Tracer, summers 1920-1922 with Survey Corps, becoming Draftsman (1922), and July-Sept. 1923 Draftsman on investigation and preliminary design for reinforced concrete bridge across Schuylkill River, all for Dept. of City Transit, Philadelphia, Pa. *TT 1.7: SP 1.5: P 0.2: D 0.2.*—Sept. 1918 to Jan. 1919 Private, S. A. T. C., Univ. of Pennsylvania. Oct. 1923 to date with Eng. Dept., Philadelphia Rapid Transit Co., 3 years as Draftsman on design and alterations of steel, timber and concrete framework for public-utility buildings, investigation, inspection of timber, steel and concrete trusses and bridges (stresses and construction), 2 months Chf. Inspector on subway work, made decisions as to construction methods and suggestions for traffic and construction, since Dec. 1926 Structural Squad Leader in charge of making design and detail plans for steel, timber and concrete framework for public utility buildings and alterations to same, also design and detail, shoring plans; investigation of steel and timber bridges, timber and steel framework design for wood and concrete floor systems; estimates, investigation of and design of welding for, truss work design and control of concrete mix structural engineering problems for construction and checking shop details; design of foundations and underpinning. *TT 5.5: P 5.5: RC 5.5: D 5.2.—TT 11.2: SP 1.5: P 9.7: RC 2.6: D 5.4.* Refers to W. H. Barton, Jr., H. C. Berry, B. T. Grandlienard, S. Harris, H. H. Quimby, W. R. Scanlin, R. C. Scott, C. H. Stevens.

The Board of Direction will consider the applications in this list not less than thirty days after the date of its issue.